3-1040-220-12+P

TECHNICAL MANUAL

OPERATOR'S AND ORGANIZATIONAL

MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL

TOOLS LISTS)

DISPERSER, RIOT CONTROL AGENT, HELICOPTER OR VEHICLE MOUNTED, M5

(NSN 1040-00-805-3019)

HEADQUARTERS, DEPARTMENT OF THE ARMY

MARCH 1977

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WARNINGS

The operator must wear protective mask, hood, and rubber gloves while operating this disperser.

The entire helicopter crew or vehicle crew must be equipped with protective masks.

Either the pilot or copilot must wear a protective mask during the entire mission.

Vehicle operator must wear a protective mask while operating the vehicle.

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DEPARTMENT OF THE ARMY
WASHINGTON, DC, 25 March 1977

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Current as of 1 Dec 76

You can help improve this manual by calling attention to errors and by recommending improvements and by stating your reasons for the recommendations. Your letter or DA Form 2028, Recommended Changes to Publications, should be mailed directly to Commander, Edgewood Arsenal, Attn: SAREA-DE-ET, Aberdeen Proving Ground, MD 21010. A reply will be furnished directly to you. For your convenience, preaddressed DA Forms 2028 are included as final pages of this manual.

			Paragraph	Page
CHAPTER	1.	INTRODUCTION		
Section	I.	General		
		Scope	1-1	1-1
		Record and report forms	1-2	1-3
	II.	Description and Data		
		Description	1-3	1-3
		Identification	1-4	1-5
		Tabulated data	1-5	1-7
		Protective equipment	1-6	1-7
		Expendable supplies and materials list	1-7	1-9
CHAPTER	2.	OPERATING INSTRUCTIONS		
Section	I.	Controls and Instruments		
		General	2-1	2-1
		Controls	2-2	2-1
		Instruments	2-3	2-3
	II.	Operation Under Usual Conditions		
		Starting	2-4	2-4
		Operation	2-5	2-4
		Stopping	2-6	2-5
	III.	Operation Under Unusual Conditions		
		Operation in extreme cold	2-7	2-6
		Operation in high wind	2-8	2-6
		Operation in extreme heat and humidity	2-9	2-6
CHAPTER	3.	OPERATOR's MAINTENANCE INSTRUCTIONS		
Section	I.	Operator's Preventive Maintenance Services		
		General	3-1	3-1
		Before operation services	3-2	3-1

*This manual supersedes TM 3-1040-220-12, 21 May 1963, and TM 3-1040-220-20P, 5 Aug 71, including all changes.

			Paragraph	Page
		During operation services	3-3	3-1
		After operation services	3-4	3-1
		Preventive maintenance check list	3-5	3-1
	II.	Maintenance		
		Field CB mask hood	3-6	3-2
		Rubber gloves	3-7	3-3
CHAPTER	4.	ORGANIZATIONAL MAINTENANCE INSTRUCTIONS		
Section	I.	Service Upon Receipt of Materiel		
		New equipment	4-1	4-1
		Used equipment	4-2	4-3
		Disperser installation and tiedown	4-3	4-3
	II.	Servicing		
		Charging compressed gas cylinders	4-4	4-3
		Filling agent container	4-5	4-3
	III.	Special Tools and Equipment		
		Tools	4-6	4-4
		Equipment	4-7	4-4
	IV.	Organizational Preventive Maintenance Services		
		Before operation services	4-8	4-4
		After operation services	4-9	4-4
		Preventive maintenance checks and services	4-10	4-5
	V.	Troubleshooting		
		General	4-11	4-5
		Troubleshooting table	4-12	4-6
	VI.	Pressure Group		
		Dial indicating high pressure gage	4-13	4-7
		Dial indicating low pressure gage	4-14	4-7
		Rupture disk	4-15	4-7
		Safety plug	4-16	4-8
	VII.	Gun group		
		Description and function	4-17	4-8
		Maintenance	4-18	4-8
	VIII.	Helicopter Delivery Hose Assembly		
		Description and function	4-19	4-9
		Maintenance	4-20	4-9
CHAPTER	5.	MATERIEL USED IN CONJUNCTION WITH DISPERSER		
Section	I.	M27 Portable Flamethrower Riot Control Agent Disperser Service Kit		
		General	5-1	5-1
		Use	5-2	5-1
	II.	AN-M4 3½ CFM Series Flamethrower Power Driven Reciprocating Compressor		
		General	5-3	5-1
		Use	5-4	5-1
APPENDIX	A.	REFERENCES		A-1
	B.	BASIC ISSUE ITEMS LIST (BIIL) AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST (ITIAL) AND ORGANIZATIONAL MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST		B-1
	C.	MAINTENANCE ALLOCATION CHART (MAC)		C-1

LIST OF ILLUSTRATIONS

Number	*Title*	*Page*
1-1	M5 helicopter or vehicle mounted riot control agent disperser	1-2
1-2	Accessories	1-4
1-3	Disperser identification plate	1-5
1-4	Control panel and M9 gun nameplates	1-6
1-5	Individual protective equipment	1-8
2-1	Controls and instruments	2-1
2-2	Helicopter operational dispersal distance	2-5
4-1	Disperser wooden crate	4-2
B-1	Base and container group	B-4
B-2	Ball valve	B-6
B-3	Pressure, high pressure line section	B-7
B-4	Pressure group, low pressure line section	B-8
B-5	Pressure group, support section	B-9
B-6	Accessories group	B-10
B-7	Accessories group, gun section	B-12

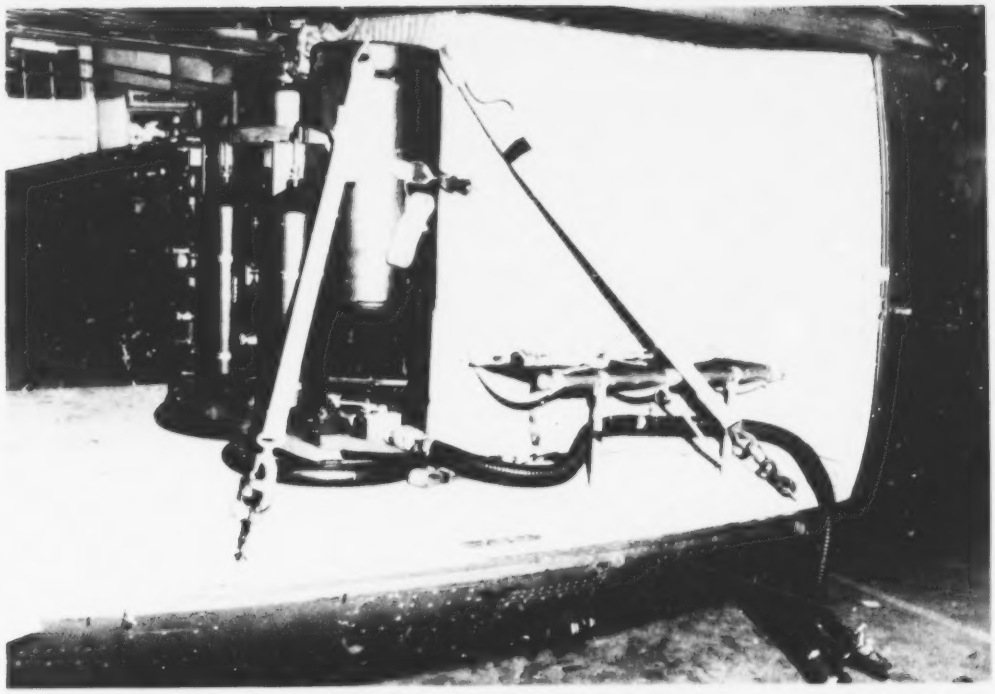
CHAPTER 1

INTRODUCTION

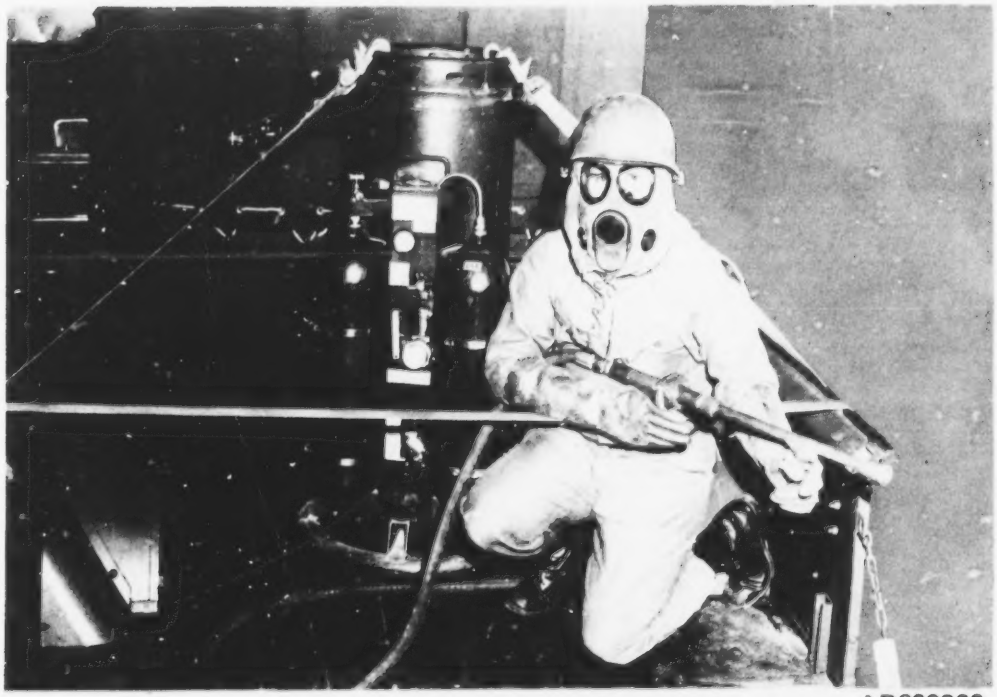
Section I. GENERAL

1-1. Scope

These instructions are for use by the operator and organizational maintenance personnel. They apply to the Disperser, Riot Control Agent, Helicopter or Vehicle Mounted, M5 (fig. 1-1). Hereafter, this equipment will be referred to as disperser. In this manual riot control agent is referred to as agent.



A. TYPICAL HELICOPTER MOUNTING



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B. TYPICAL VEHICLE MOUNTING

Figure 1-1. M5 helicopter or vehicle mounted riot control agent disperser.

1-2. Record and P[illegible] Forms

a. Equipmen[illegible]aintenance forms and procedures for their use are prescribed in TM 38-750.

b. Use DD Form 6 (Report of Packaging and Handling Deficiencies) to report damage or improper shipment of materiel.

c. Refer to TM 740-90-1, Administrative Storage of Equipment, for administrative storage instructions on the disperser.

d. Refer to TM 43-0002-85, TM 9-1300-200, and FM 5-25 for destruction instructions on this disperser.

e. Refer to TB 43-180, Calibration Requirements for the Maintenance of Army Materiel, which lists the two gages that require calibration on the disperser.

f. Refer to TM 43-0139, Painting Instructions for Field Use, for painting instructions on the disperser.

Section II. DESCRIPTION AND DATA

1-3. Description

a. Use. This disperser is used on either a low flying helicopter or a moving ground vehicle to disperse agent to control uprisings, disturbances, or riots.

b. General. The disperser (fig. 1-1) consists of the base, the container, the air pressure system, accessories and the parts kit.

c. Base. The base is an aluminum weldment consisting of a base assembly ring and five tubes. The tubes have six socket holes and six luggage catches. The socket holes support the socket type feet of the container and the air pressure system. The luggage catches securely fasten the container and the air pressure system to the base. The base provides the base for the container and the air pressure system.

d. Container. The container is a weldment consisting of the agent container assembly, three socket type feet, a steel support, and three catch strikes. A clamp, a cover plate, and a packing are removable at the end of the container assembly with the steel neck. The container assembly is filled with agent through the steel neck or through the filling opening in the base end of the agent container.

e. Air Pressure System. The air pressure system consists of four sections: a support section; a high pressure line section; a low pressure line section; and a disperser section.

(1) *Support section.* The support section consists of a welded control panel, three socket type feet with catch strikes, and a lifting handle. The lifting handle is used when the pressure group is removed or assembled to the base group.

(2) *High pressure line section.* The high pressure line section consists of two compressed gas cylinders, a pressure regulator, a nonmetallic hose assembly, a 0 to 3,000 psi scale dial indicating pressure gage, an angle valve, a globe valve, a connector block, and a metal tube assembly plus other miscellaneous hardware.

(3) *Low pressure line section.* The low pressure line section consists of two nonmetallic hose assemblies, a relief safety valve, a head assembly, a lever plug valve, a pipe cross, and a dial indicating pressure gage with a 0 to 200 psi scale plus other miscellaneous hardware.

(4) *Dispersion section.* The dispersion section consists of two quick disconnect coupling halves, a check valve, a pipe elbow, a nozzle, a ball valve, and other miscellaneous hardware.

f. Accessories. The accessories (fig. 1-2) consist of hose and helicopter frame tiedowns, preformed packings, four snap hook and ring assemblies, a cover plate, rubber gloves, two M6A2 CB mask hoods, four aircraft cargo tiedowns, and a corrugated hose assembly. For ground vehicle riot control missions an M9 disperser riot control portable gun is a required accessory. The M9 gun consists of a barrel assembly, a valve body, rubber tubing, a trigger safety, trigger spring, and trigger plus other miscellaneous hardware. A nonmetallic hose assembly is required to deliver the agent to the M9 gun.

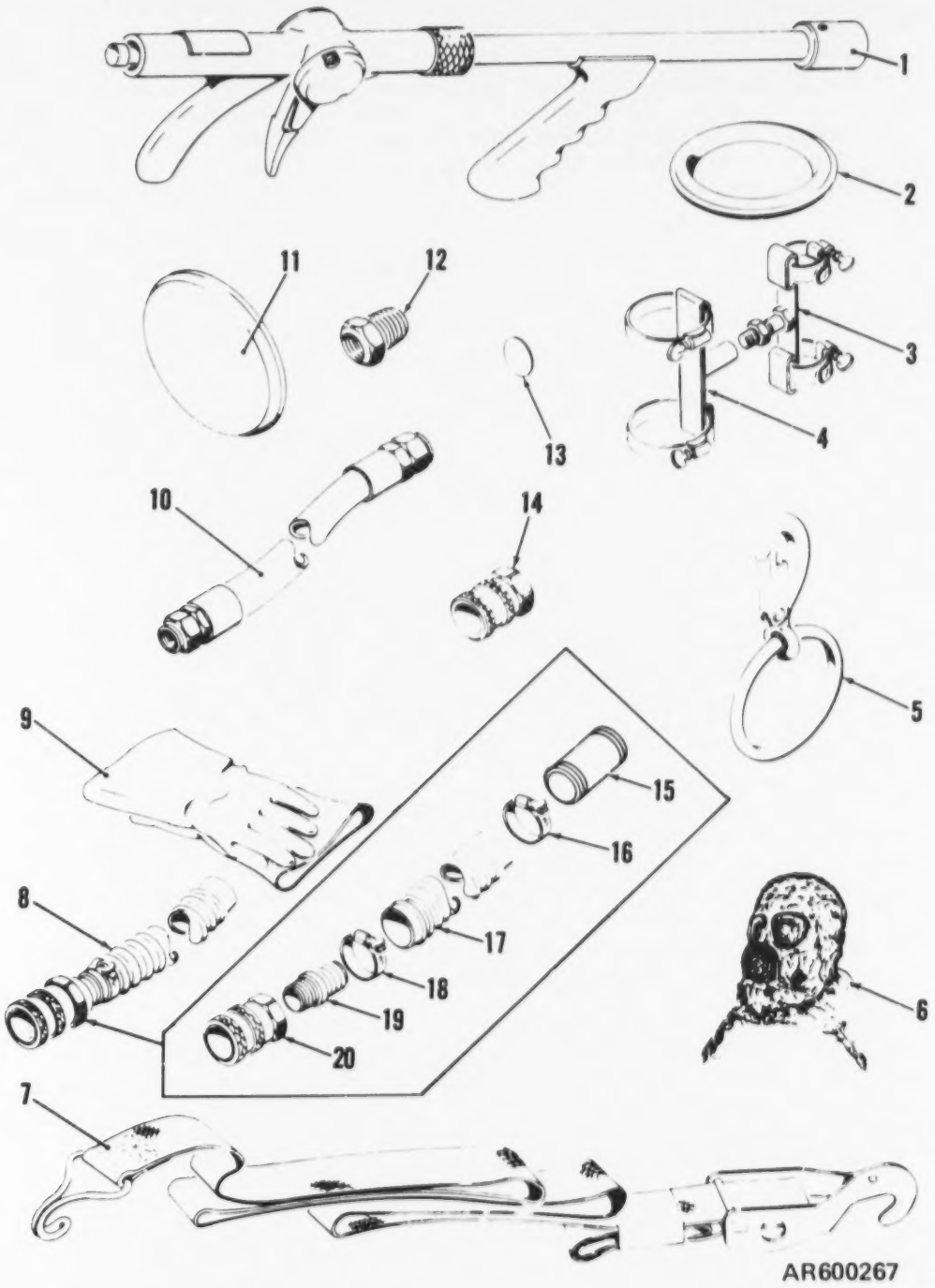


Figure 1-2. Accessories.

Key to figure 1-2:

1 M9 gun
2 Preformed packing
3 Hose tiedown
4 Helicopter frame tiedown
5 Snap hook and ring assembly
6 M6A2 CB mask hood (on an M17 series mask)
7 Aircraft cargo tiedown
8 Corrugated hose assembly (Helicopter delivery hose)
9 Rubber gloves
10 Nonmetallic hose assembly (M9 gun delivery hose)
11 Cover plate
12 Bushing
13 Rupture disk
14 Quick-disconnect coupling half
15 Aluminum tube
16 Hose clamp
17 Corrugated hose
18 Hose clamp
19 Adapter
20 Quick-disconnect coupling half

1-4. Identification

a. Disperser. The disperser identification plate is shown in figure 1-3. This plate is attached to the control panel between the two compressed gas cylinders.

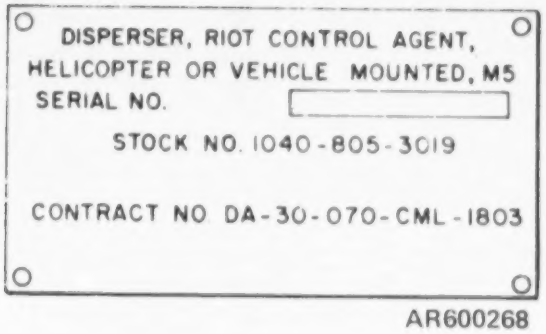
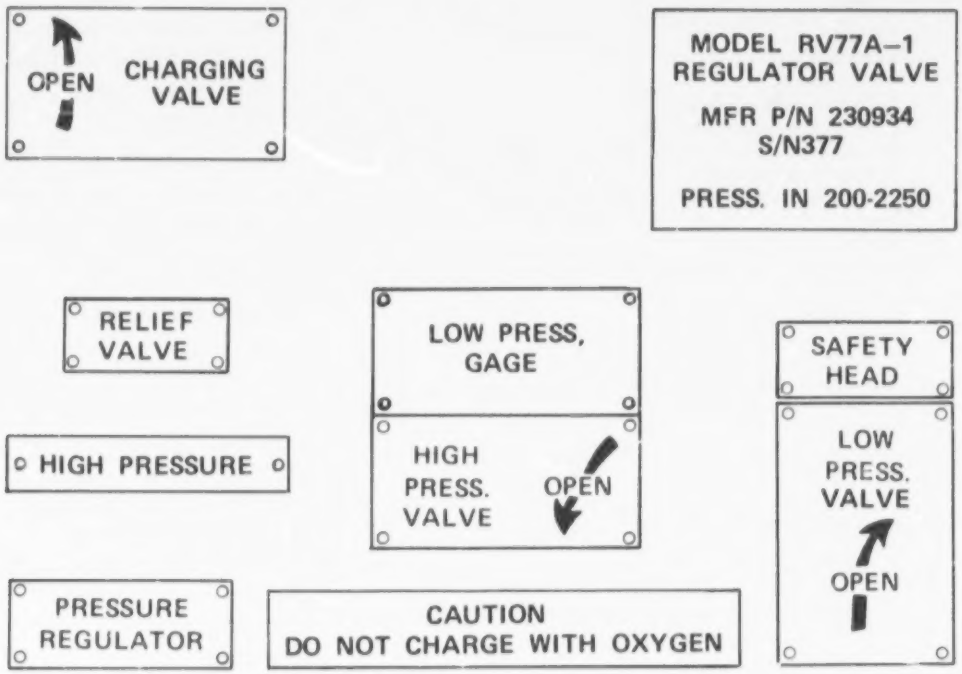
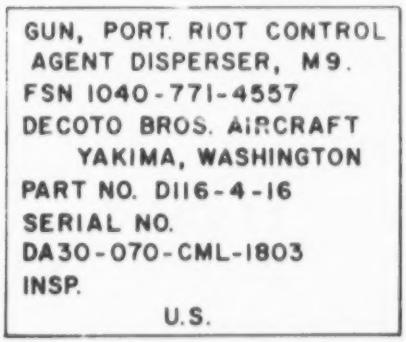


Figure 1-3. Disperser identification plate.

b. Other nameplates. Six nameplates (on the control panel) are shown in A, figure 1-4. The M9 gun nameplate (B) is attached to the valve section of the M9 gun. (The M9 gun is used on the disperser when operating the disperser from a ground vehicle).



A. CONTROL PANEL NAMEPLATES



B. GUN NAMEPLATE

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Figure 1-4. Control panel and gun nameplates.

1-5. Tabulated Data

a. Dimensions

	Present	Metric
Height	4 ft	1.22 m
Width	2 ft	0.61 m
Depth	2 ft	0.61 m
b. Weight		
Uncrated and empty	174 lb	64.5 Kg
Uncrated and filled with T1 talc	310 lb	115.6 Kg
Uncrated and filled with CS1 or CS2	223 lb	83.2 Kg
c. Performance		
Time required (continuous operation) to empty agent container	2 min	
Dispersion pressure	45 to 55 psi	3.16 to 3.81 Kg/C^2
Helicopter elevation during dispersion	75 to 100 ft	22.86 to 30.48 m
Ground vehicles range in still air using gun	zero to 40 ft	0 to 12.19 m
d. Temperature Ranges		
Operating (helicopter or ground vehicle)	−25°F. to +115°F.	−31.7°C. to 46°C.
Storage (empty and inert)	−65°F. to +165°F.	−53.9°C. to 73.9°C.

1-6. Protective Equipment

Rubber gloves and a protective mask such as the M17 with attached M6A2 mask hood as shown in figure 1-5 shall be worn by the operator during the entire mission.

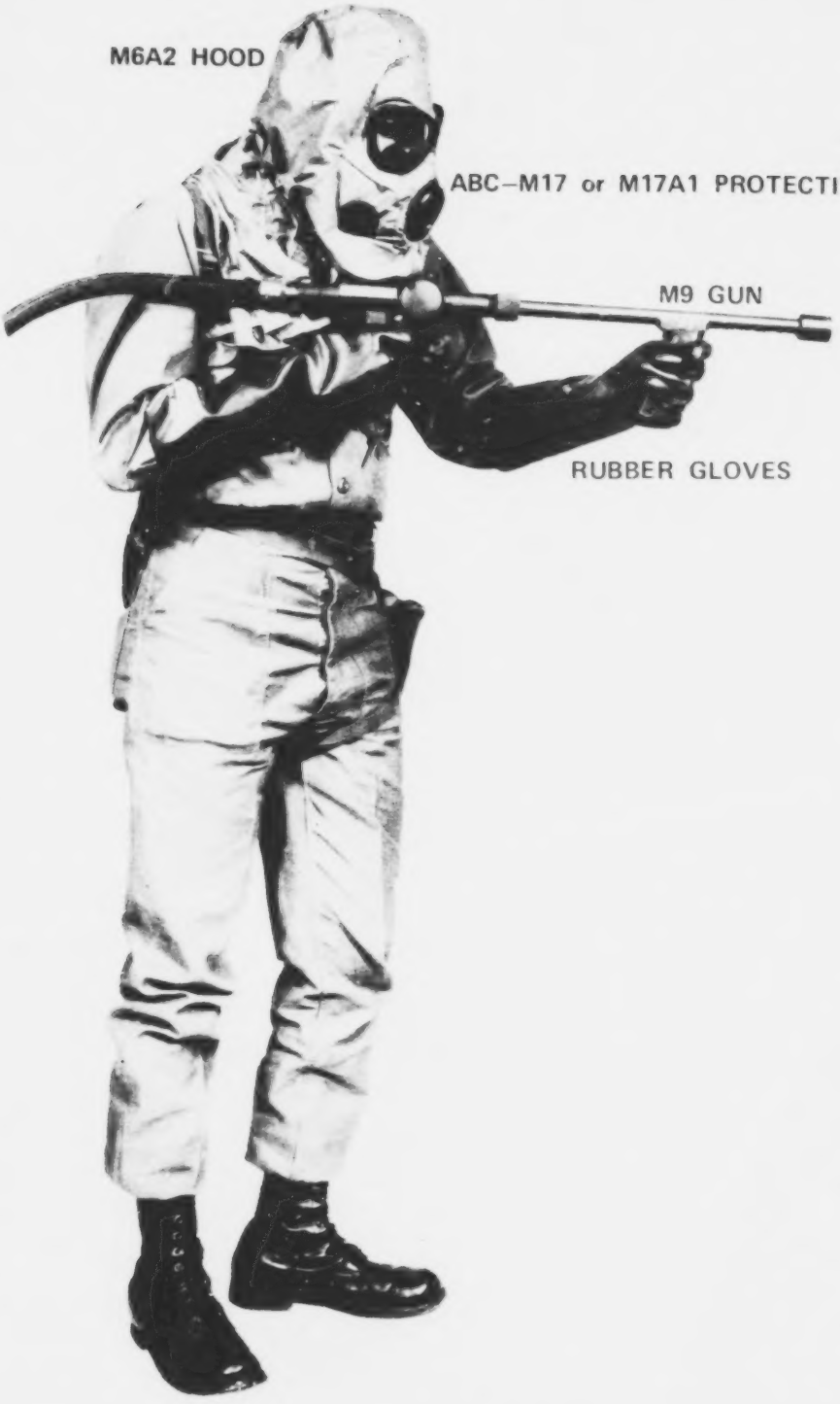


Figure 1-5. Individual protective equipment.

1-7. Expendable Supplies and Materials List

Table 1-1 lists expendable supplies and materials you will need to operate and maintain the disperser. These items are authorized to you in accordance with the provisions of Common Table of Allowances, CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts and Heraldic Items).

Table 1-1. Expendable Supplies and Materials List

Nomenclature	Use	National Stock Number
Enamel, Olive drab, No. 34087, Fed Spec TT-E-527	External surfaces	8010-00-297-0560
Teflon antiseize tape	Use on pipe threads	8030-00-889-3535
Antiseize compound	Use on pipe threads	8030-00-087-8630
Gloves, Rubber, Mens, Synthetic	To protect hands	8415-00-266-8677
Talc, Technical, T1	Training purposes	6810-00-543-7612
Detergent, water soluble (MIL-D-16791), 1 gallon container (81349)	Cleaning of parts	7930-00-282-9699
Drycleaning Solvent (Stoddard solvent) (P-D-680, type 1) 1 gallon container	To clean parts	6850-00-281-1985
Sealing Compound	To seal connectors	8030-00-209-8005
Riot Control Agent, CS1	To fill agent container	1365-00-926-1914
Wetting agent	To decontaminate parts	6850-00-456-1784
Monoethanolamine (MEA) (MIL-E-50011A)	To decontaminate parts	6810-00-270-6207

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. CONTROLS AND INSTRUMENTS

2-1. General

This section describes the location and purpose of the controls and instruments for the disperser.

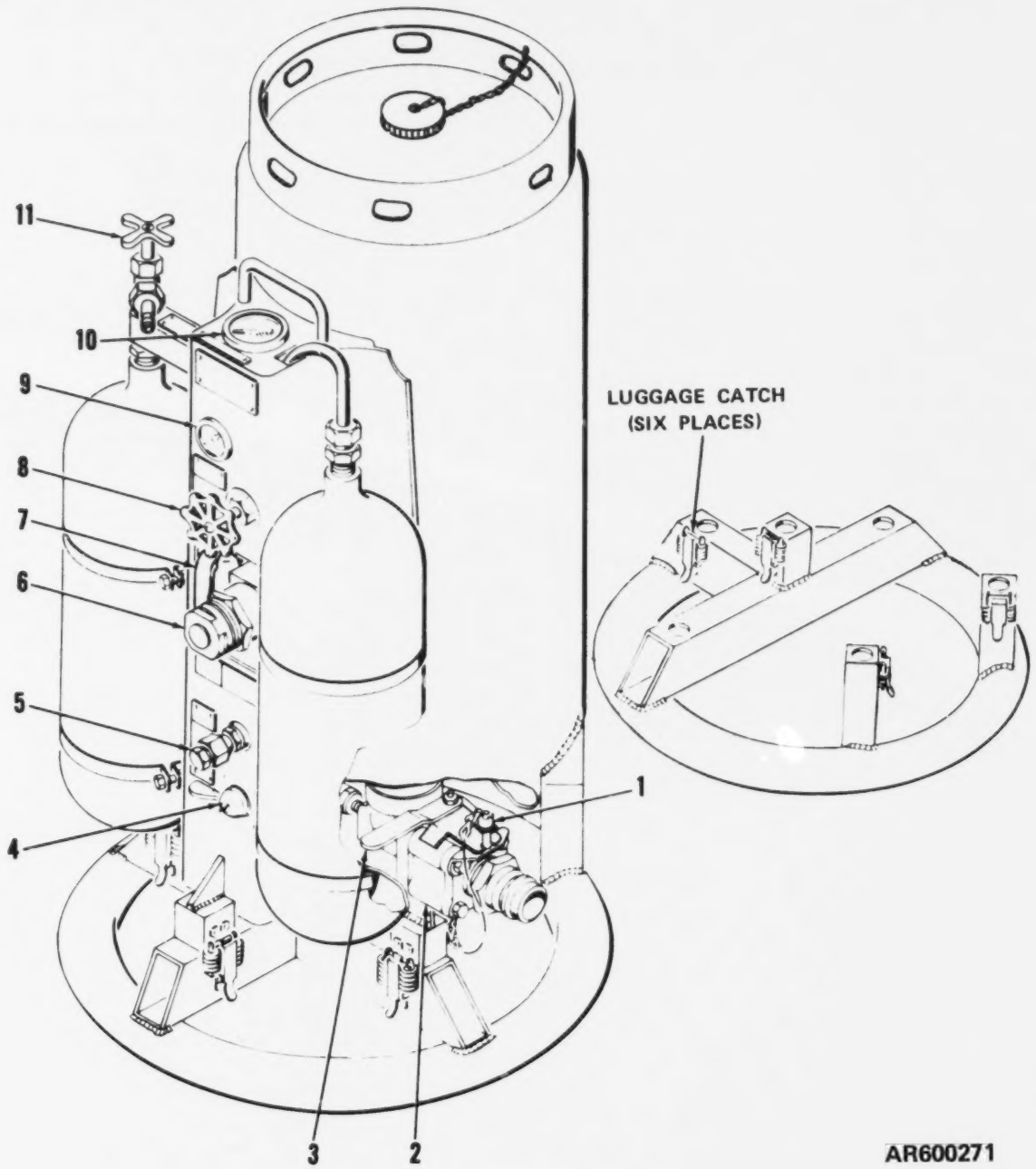
2-2. Controls

a. General. The controls on this disperser are shown in figure 2-1. They are as follows: quick release pin (1); ball valve (2); lever plug valve (4); safety head assembly (5); relief safety valve (7); and globe valve (8). The angle valve (11) is NOT to be used by the operator. Two controls are on the M9 gun. The M9 gun controls are the trigger and the trigger safety.

b. Quick Release Pin.

(1) *Location.* The quick release pin (1) is a captive safety pin and may be referred to as ball valve safety. The quick release pin is fastened to one end of a chain. The other end of the chain fastens to the outlet side of the ball valve (2).

(2) *Purpose.* The quick release pin prevents operation of the ball valve operating handle (3) without first removing the quick release pin from the lock plate and lock stop plate.



1 Quick release pin
2 Ball valve
3 Handle
4 Lever plug valve
5 Safety head assembly
6 Pressure regulator
7 Relief safety valve
8 Globe vlave
9 Dial indicating pressure gage (0-200 psi scale)
10 Dial indicating pressure gage (0-3,000 psi scale)
11 Angle valve

Figure 2-1. Controls and Instruments.

c. Ball Valve.

(1) *Location.* The ball valve (2, fig. 2-1) is assembled on the mixing nozzle located immediately below the agent container.

(2) *Purpose.* The ball valve controls the flow of agent from the agent container. Turning the handle (3) 90° counterclockwise opens the valve and turning the handle 90° clockwise closes the valve.

d. Lever Plug Valve.

(1) *Location.* The lever plug valve (4) is adjacent to the LOW PRESS. VALVE nameplate on the control panel.

(2) *Purpose.* The lever plug valve controls the flow of the low pressure air to the 0-200 psi scale dial indicating pressure gage (9) and the agent container. Turning the valve handle clockwise opens the valve and turning the valve handle counterclockwise closes the valve.

e. Safety Head Assembly.

(1) *Location.* The safety head assembly (5) is adjacent to the SAFETY HEAD nameplate on the control panel.

(2) *Purpose.* When pressure of 110 (± 10) pounds builds up in the low pressure line section (caused by a faulty pressure regulator), the rupture disk inside the safety head bursts. The rupture disk inside the safety head is designed to burst at 110 (± 10) pounds pressure. As soon as the operator turns on the lever plug valve (LOW PRESS. VALVE) (4) and if air escapes through the safety head, allow the air to continue to escape. When all pressure has escaped, turn in the disperser to organizational personnel.

f. Relief Safety Valve.

(1) *Location.* The relief safety valve (7) is located behind the control panel adjacent to the nameplate RELIEF VALVE. The relief safety valve is accessible through a cutout in the face of the control panel.

(2) *Purpose.* The relief safety valve is preset to operate automatically at 80 (± 8) psi pressure. If the regulated pressure exceeds 80 psi pressure, the relief safety valve will open to vent the excess pressure. The relief valve is equipped with a lever. The operator can pull the lever at any time to relieve the pressure.

g. Globe Valve.

(1) *Location.* The globe valve (8) is located on the front of the control panel.

(2) *Purpose.* The globe valve controls the flow of high pressure air from the two compressed gas cylinders. Turning the valve knob counterclockwise opens the valve and applies high pressure air to the 0 to 3,000 dial indicating pressure gage (10) and the pressure regulator (6). Turning the valve knob clockwise closes the valve.

NOTE

The M9 gun is used when firing from a ground vehicle only. The trigger (*h* below) and the trigger safety (*i* below) are on the M9 gun. The M9 gun is not used when firing from a helicopter.

h. Trigger.

(1) *Location.* The trigger is located on the M9 gun in front of the rear handle below the valve section.

(2) *Purpose.* The trigger controls the release of agent to the atmosphere when operating the disperser from a ground vehicle. Squeezing the trigger opens a constriction in the rubber tube, permitting the agent to disperse. Releasing the trigger causes a constriction in the rubber tube, thus stopping the flow of agent.

i. Trigger Safety.

(1) *Location.* The trigger safety is located on the M9 gun trigger immediately below the valve section.

(2) *Purpose.* The trigger safety prevents accidental operation of the trigger. The safety must be released before the trigger can be actuated.

2-3. Instruments

a. General. The disperser is equipped with two instruments, one is the dial indicating pressure gage, 0 to 3,000 psi scale (10, fig. 2-1) and other one is a dial indicating pressure gage, 0 to 200 psi scale (9).

b. Dial Indicating Pressure Gage, 0 to 3,000 PSI Scale.

(1) *Location.* The dial indicating pressure gage (10) is mounted on the top of the control panel.

(2) *Purpose.* The dial indicating pressure gage indicates air pressure in the compressed gas cylinders when the globe valve (8) is open. This gage is capable of indicating pressure between zero and 3,000 pounds per square inch (psi). In this disperser, the normal charging high pressure for the compressed gas cylinders is 2,000 (± 100) psi.

c. Dial Indicating Pressure Gage, 0 to 200 PSI Scale.

(1) *Location.* The dial indicating pressure gage (9) is mounted on the front of the control panel.

(2) *Purpose.* The dial indicating pressure page indicates the regulated air pressure being delivered to the agent container. This gage is scaled from zero to 200 psi. In this disperser, the normal pressure regulator controlled pressure is between 45 and 55 psi.

Section II. OPERATION UNDER USUAL CONDITIONS

2-4. Starting

WARNING

Either the pilot or copilot must wear a protective mask during the entire mission.

WARNING

Vehicle operator must wear a protective mask while operating the vehicle.

WARNING

The entire helicopter crew or vehicle crew must be equipped with protective masks.

WARNING

The operator must wear protective masks, hood, and rubber gloves while operating this disperser.

a. Protective Clothing and Equipment. Ordinary field clothing with buttoned collars and cuffs and trouser legs tucked into boots will suffice for protecting the body against the effects of CS. Personnel who handle or disperse agents must wear rubber gloves, a protective mask, and hood (fig. 1-5). Personnel who handle or disperse agent will insure that the mask hood and protective mask fit together as CS on the face and neck can cause annoying irritation, especially on skin wet with perspiration.

b. Before Operating Services—Helicopter.

(1) Before starting mission in the helicopter, check that the exterior surfaces of the disperser are free of any possible spilled agent and that the disperser surfaces are dry.

(2) After organizational maintenance personnel have mounted the disperser in the helicopter, the operator must check that the following before operation services were performed:

(*a*) that corrugated hose is in a straight line from ball valve to exit.

(*b*) that disperser is installed with controls, valves, and gages visible and accessible to the operator for easy operation.

(*c*) that disperser is installed with cargo tiedowns securely fastened to the helicopter floor rings.

(*d*) that corrugated hose is taped to the helicopter where necessary. The hose should be taped to the strut just above the helicopter tiedown.

(*e*) that slack was allowed in corrugated hose open end to allow for extension of landing gear strut on take off.

(*f*) that open end of hose is not aimed at any part of the helicopter and that hose open end points down.

WARNING

If the helicopter tiedown clamps have nylon sleeves over them remove the nylon sleeves and discard them to prevent rotating of the disperser nozzle.

(*g*) that helicopter tiedown and hose tiedown are tight and that jam nut is tight so that the hose tiedown cannot rotate.

(*h*) that the quick release pin (1, fig. 2-1) is properly installed and that the pin can be withdrawn and installed by the operator wearing gloves.

(*j*) that the agent container was filled with the agent prescribed for the mission and that the compressed gas cylinders were charged with air between 1,900-2,100 psi pressure.

c. Before Operation Services—Ground Vehicle.

(1) Before starting a mission in the ground vehicle, check that the exterior surfaces of the disperser are free of any possible spilled agent and that the disperser surfaces are dry.

(2) After organizational maintenance personnel have mounted the disperser in the ground vehicle, the operator must check that the following before operation services were performed:

(*a*) that disperser is installed with controls, valves, and gages visible and accessible to the operator for easy operation.

(*b*) that disperser is installed with cargo tiedowns securely fastening the disperser to the ground vehicle.

(*c*) that the agent container was filled with the agent prescribed for the mission and that the compressed gas cylinders were charged with air between 1,900-2,100 psi pressure.

(*d*) that the quick release pin (1, fig. 2,1) is properly installed and that the pin can be withdrawn and installed.

(*e*) that the nonmetallic hose assembly will not kink at quick disconnect coupling when maneuvered.

(*f*) that M9 gun is securely screwed on the nonmetallic hose.

(*g*) that M9 gun trigger safety operates properly.

(*h*) that the troop seats on the ground vehicle are in the down position (or are off the vehicle).

2-5. Operation

a. General. Travel of the agent cloud after its release from the disperser depends on the surface wind. Consequently, the disperser must always be operated upwind from the target area so that the agent will be blown to the target. The disperser cannot be relied upon to give effective results when the surface windspeed is greater than 20 miles per hour.

b. Preparation for Operation. Open the globe

.alve (8, fig. 2-1). Verify that both of the dial indicating pressure gages indicate their correct operating pressures. 1,900-2,100 psi and 45-55 psi respectively. Check that the quick release pin (1) is holding the handle(3) locked. Open the lever plug valve (4) to admit air pressure into the agent container.

c. Releasing Agent.

(1) *Helicopter mounted operation.* At area where the agent is to be released, remove the quick release pin. Open the ball valve to start the agent dispersing. When the target has been covered, close the ball valve. (Or if the agent is all gone, close the ball valve. Or when the mission is completed, close the ball valve). Install the quick release pin through the lock stop plate and the lock plate.

(2) *Vehicle mounted operation.* While enroute to the target area, remove the quick release pin (1, fig. 2-1). Open the ball valve to allow agent to fill up to the M9 gun rubber tube constriction. To disperse the agent, the operator must squeeze the gun trigger as required. When the mission is completed, close the ball valve. Install the quick release pin through the lock stop plate and the lock plate. Any pressure and agent trapped between the closed ball valve and the M9 gun should be released

WARNING

If the trigger spring in the M9 gun breaks during operation, push and hold the trigger in the forward position to stop the flow of agent. If conditions warrant, resume firing. Pull the trigger back to continue firing. Otherwise, to stop the complete flow of agent, push the trigger forward and engage the trigger safety in the safety catch; close the ball valve; install the quick release pin; and close the lever plug valve and the globe valve.

d. Dispersion From Helicopter. For maximum effect, the agent should be released from an altitude of 75 to 100 feet while the helicopter is traveling across the wind at 40 to 50 miles per hour indicated airspeed. Figure 2-2 can be used initially to determine the distance upwind from the target that the agent should be released. Subsequently, the helicopter can pass nearer to or farther from the target to make certain the agent falls where desired. In general, increasing the speed or altitude of the aircraft will lessen the density and effectiveness of the agent which falls on the target. However, the helicopter should not fly lower that 75 feet, to prevent the agent from being blown into the helicopter by the deflected rotor blast.

CAUTION

Operation of the disperser while the helicopter is hovering or flying at speeds less than lift speed may result in contamination of the helicopter due to circulation of the agent in the rotor wash.

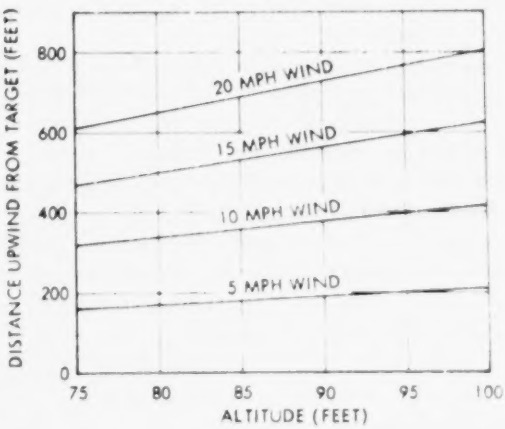


Figure 2-2. Helicopter operational dispersal distance

e. Dispersion From Vehicle.

For maximum effort, the agent should be released from the vehicle while the vehicle is traveling across the wind at approximately 10 miles per hour. The disperser operator can sit, stand, or kneel at the rear of the vehicle to operate the gun. The maximum range of the gun, which is 40 feet in still air, must be taken into consideration when determining dispersal distance from the target area. Never fire the M9 gun into the wind. Under normal conditions, increasing the speed of the vehicle will lessen the density of the agent cloud, hence the effectiveness, of the agent which flows to the target. Conversely, decreasing the speed will increase the agent density on the target.

2-6. Stopping

a. Removal Procedures.

(1) When the mission is completed, close the ball valve. Install the quick release pin.

(2) Notify organizational maintenance personnel to remove the used, contaminated disperser from the vehicle ro the helicopter.

(3) Plug the corrugated hose open end using a piece of friction tape or a piece of waste stuffed in the opening before organizational maintenance personnel removes the disperser from the helicopter.

(4) Park the helicopter or the vehicle downwind to other equipment and personnel. The operator and

the other members of the crew should stand upwind of the vehicle or helicopter and remove protective equipment.

b. Personnel Decontamination. After the mission, all personnel engaged in the operation will flush their body with cool water for at least 3 minutes. Follow this procedure by bathing using soap and warm water. A complete change of clothing is required.

c. Turnaround Operation. If the vehicle or the helicopter is to be reloaded; the operator and the crew will remain masked and stay with their helicopter or vehicle. The operator of the disperser may assist the organizational maintenance personnel in removing the used disperser from the helicopter or the vehicle and installing a fully serviced one into the helicopter or vehicle.

Section III. OPERATION UNDER UNUSUAL CONDITIONS

2-7. Operation in Extreme Cold

Extremely cold weather will not affect the operation of the disperser. However, the corrugated hose, the rubber tube in the gun, and all preformed packings should be inspected regularly because extreme cold causes rubber components to become brittle.

2-8. Operation in High Wind

A high wind can have adverse effects on the use of the disperser. To make certain the agent has maximum effect the operator should always use the disperser upwind of the target and never in a headwind. If operation in a strong crosswind is unavoidable, make due allowance for drift of the agent.

2-9. Operation in Extreme Heat and Humidity

Extreme heat and humidity will not affect the operation of the disperser. However, the corrugated hose, the rubber tube in the gun, and all preformed packings should be inspected regularly because heat and humidity cause rubber to deteriorate.

CHAPTER 3

OPERATOR'S MAINTENANCE INSTRUCTIONS

Section I. OPERATOR'S PREVENTIVE MAINTENANCE SERVICES

3-1. General

The operator of the disperser is responsible for regular performance of preventive maintenance services to insure that the disperser operates properly and to lessen the probability of failures. These services generally consist of before, during, and after operation services.

3-2. Before Operation Services

a. General. The purpose of before operation services is to determine whether the disperser is in good operating condition. Deficiencies must be corrected or reported to organizational maintenance personnel for correction before the disperser is placed in operation.

b. Visual Inspection. Make a thorough visual inspection of the disperser and check for loose or missing nuts or bolts. When necessary, tighten or replace hardware. Inspect the agent container, both compressed gas cylinders, fittings, gages, valves, and frame to be certain they are not damaged.

c. Acessories. Check that all accessories are available and in satisfactory condition. Inspect the corrugated and nonmetallic hoses to be certain they are not plugged.

d. Gages. Open the globe valve (8, fig. 2-1) and observe the readings on the dial indicating pressure gages (9 and 10).

3-3. During Operation Services

a. General. The purpose of during operation services is to make certain the disperser remains in satisfactory working order while being operated. As an integral part of the operation of the disperser, a general inspection of the unit must be continued at all times.

b. Constant Inspection. Maintain a constant check of all components of the disperser. Check all fittings and connections for leaks. If deficiency cannot be corrected by the operator, close the ball valve, install the quick release pin, and close the lever plug and globe valves. Report the deficiency to organizational maintenance personnel.

c. Gages. Maintain a continuous check on the readings of the dial indicating pressure gages (9 and 10, fig. 2-1). Report any deficiencies to organizational maintenance personnel.

3-4. After Operation Services

a. General. The purpose of after operation services is to make certain the equipment will be in proper operating condition at all times. Correct all deficiencies within the capabilities of the operator. Report all other deficiencies to organizational maintenance personnel.

b. Visual Inspection. Inspect disperser components for damage. Check for loose or missing parts. Report damage, missing parts, and all other deficiencies to organizational maintenance personnel.

c. Accessories. Inspect all accessories to make certain that all items required are accounted for and in good condition.

d. Cleaning. Clean the disperser and its accessories throughly.

3-5. Preventive Maintenance Checklist

a. Purpose. The preventive maintenance checklist provides the operator of the disperser with a summary of the services to be performed before, during, and after each operation. The checklist should be used each time preventive maintenance is performed to insure that all required maintenance is accomplished.

b. Checklist. Deficiencies or shortcomings discovered during preventive maintenance servicing must be corrected. If correction action is not authorized, report deficiencies to organizational maintenance personnel.

Table 3-1. Operator's Preventive Maintenance Checks and Services

B—Before Operation Time required: 1.3 | D—During Operation Time required: 1.1 | A—After Operation Time required: 1.15

Interval and Sequence No. B	D	A	ITEM TO BE INSPECTED PROCEDURE	Work-time (M/H)
1			ACCESSORIES Inspect the M9 gun group for serviceability Check the trigger safety and trigger for operation. Check that gun collar and setscrews are present and are tight. Check rubber gloves and M6A2 hood for serviceability Make sure that all the accessories authorized are present and in serviceable condition.	0.5
2			CATCHES Check all catches and make sure that the container group and pressure group are securely fastened to the base group.	0.2
3			CLAMP Make sure that the clamp which secures the nozzle of the dispersion section to the mouth of the container is tight.	0.1
4			BALL VALVE Operate the ball valve handle to make sure it works. Close the ball valve.	0.1
5			PRESSURE Open the lever plug and globe valves and read the pressure on the dial indicating pressure gages. Do not use a disperser if the high pressure dial indicating pressure gage does not read between 1,900 and 2,100 psi and the low pressure dial indicating pressure gage does not read between 45 and 55 psi. Close the lever plug and globe valves.	0.3
6			RELIEF VALVE Manually trip the relief valve to relieve any pressure in the high and low pressure lines.	0.1
	7		GAGES Check the readings on the dial indicating high and low pressure gages while the disperser is in operation. Close the globe and lever plug valves when the dial indicating high and low pressure gages read zero. Close the ball valve.	0.3
	8		CONNECTIONS Check all connections for air leaks. Particular attention must be paid to the clamp which secures the nozzle of the dispersion section to the mouth of the container. If agent leaks are observed around this clamp, close the globe and lever plug valves. After the pressure has been relieved through the corrugated hose; close the ball valve. Tighten the wing nut by hand.	0.4
	9		GUN GROUP If the M9 gun is used during operation, check the nonmetallic hose connections for leaks and the trigger and trigger safety operation.	0.4
		10	DECONTAMINATION Before returning the disperser to organizational maintenance personnel, thoroughly decontaminate the exterior of the disperser by washing it down with water and permitting it to air dry. If the gun is used, the gun exterior must be decontaminated with water and air dried as well.	0.15
		11	FINAL CHECK After the disperser has thoroughly air dried, make sure the ball value is closed. Open the globe and level plug pressure valves. Hold the relief valve in the open position until all pressure is relieved.	0.5
		12	RECORDS Keep records complete (TM 38-750). Inspect the logbook to see that proper entries have been made.	0.5

Section II. MAINTENANCE

3-6. Field CB Mask Hood

a. Description. The ABC-M6A2 field CB mask hood, NSN 4240-00-999-0420, type M6A2, is for use with the ABC-M17 and M17A1 mask. This mask hood is made of butyl rubber coated nylon cloth with openings that fit securely around the ABC-M17 or M17A1 field CB mask. This mask hood is used to protect the wearer's head and neck from vapors, aerosols, and droplets of agent. TM 3-4240-279-10 contains a detailed description of both the M17 series mask and the ABC-M6A2 field CB mask hood.

b. Maintenance. Under supervision of qualified personnel, the operator will perform the following:

(1) Assemble the ABC-M6A2 hood (when issued) to the ABC-M17 or M17A1 mask.

(2) Decontaminate the hood and mask as required.

(3) Clean and condition the mask and hood as a unit, once assembled. Use a clean cloth and a warm soapy water solution (soap, NSN 8520-00-231-3006 is approved) to clean the hood and mask unit. Wring the cloth almost dry. Rinse by wiping with a clean

cloth that has been dipped in warm clear water and wrung almost dry.

(4) Practice donning the mask and hood. With mask, hood, and gloves on, perform practice drill to accustom self to wearing equipment.

3-7. Rubber Gloves

a. Description. These rubber gloves are black synthetic heavy weight rubber about 14 inches long over all and size 10. The gloves are individual fingered with a molded palm. The national stock number is NSN 8415-00-266-8677.

b. Maintenance.

(1) Check that the rubber gloves have no rips, tears, or holes in them. Make sure that they are not ususually worn.

(2) Make sure that there is a left and right hand glove per each pair. Make sure that the gloves fit the operator's hands.

(3) Decontaminate the gloves (same as mask hood) as required.

(4) Once issued, the operator must keep the gloves with the hood and the mask.

(5) Practice operating the disperser while wearing the gloves, mask, and hood.

CHAPTER 4

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIEL

4-1. New Equipment

a. General. The disperser and accessories (packed in a corrugated container) are shipped in a wooden crate (fig. 4-1). The disperser is shipped fully assembled but inert.

b. Unpacking.

(1) Cut the steel strapping on the outside of the crate. Remove steel straps.

(2) Pull nails holding top panel boards and front panel boards. Remove boards.

(3) After the top and front panels have been removed, pull nails holding braces. Remove the braces.

(4) Remove accessories container from crate.

(5) Remove disperser and spare agent container from crate. Keep all braces and panel boards for future use in recrating the disperser and accessoreis.

(6) Remove accessories from container and save container for future use in repacking the accessories.

(7) Inspect agent containers and compressed gas cylinders for evidence of serviceability tests. The test dates are coded as follows: Numbers represent the month and year (e.g., 1 through 12 for January through December, and 67 for 1967, 70 for 1970, etc.). *Example*: 4-67 indicates the test was performed during April 1967. The test dates for the compressed gas cylinders are stamped on the shoulder just below the neck. The test dates for the agent containers are stamped on the outside surface of the steel support facing the pressure group. The ltest test date on the cylinders and agent containers must be within the last 54 months (4-1/2 yrs). If the time has expired on any cylinder or agent container, return it to general support for testing.

c. Removing Protective Material. Remove the masking tape, packing material, and any preservative from the equipment. Remove preservative with drycleaning solvent.

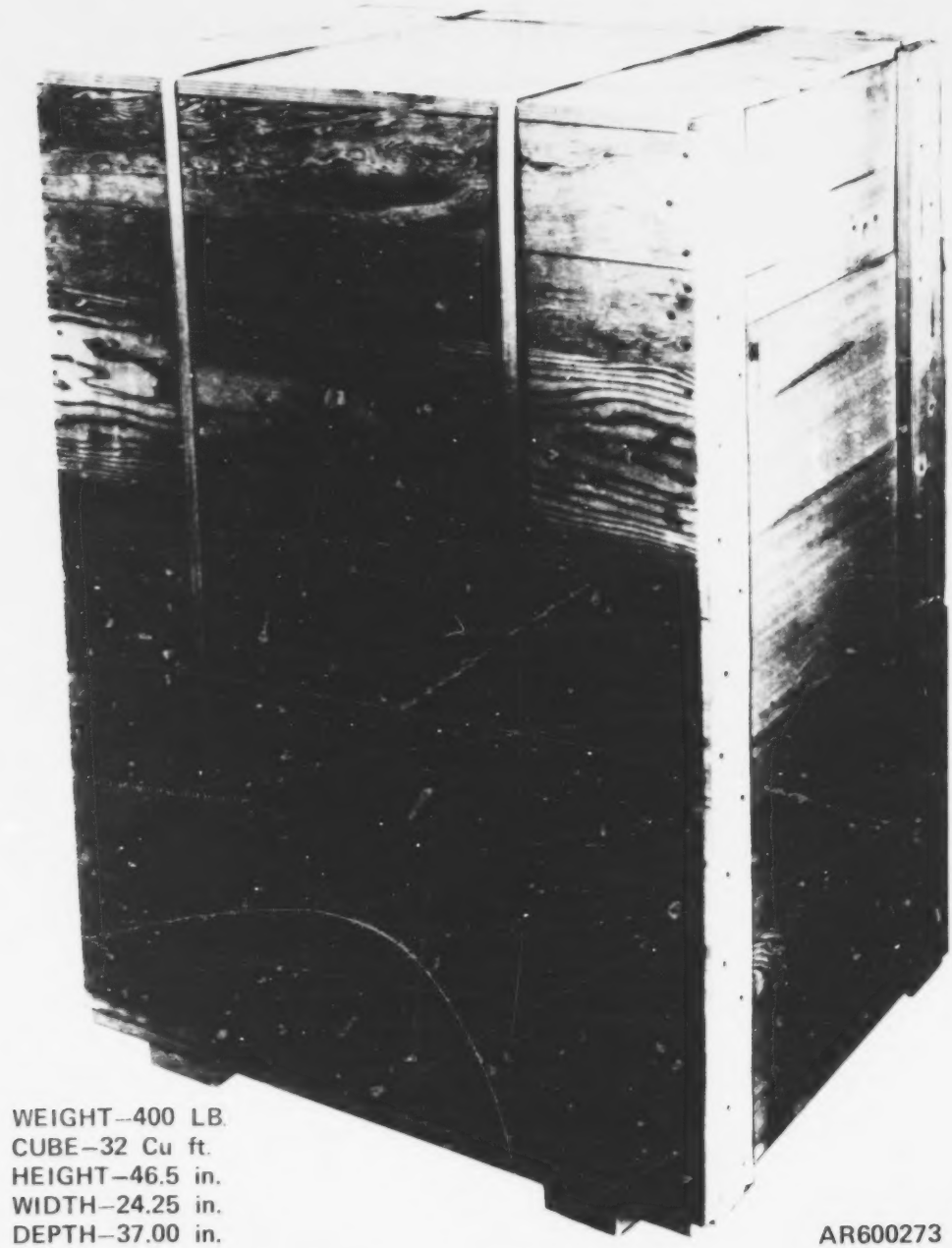


Figure 4-1. Disperser wooden crate.

NOTE

The disperser must be serviced before it is ready for operation. The compressed gas cylinders must be charged and the container filled with agent. Servicing instructions for the charging and filling operations are in paragraphs 4-4 and 4-5.

d. Accessories. The accessories were removed from their containers in paragraph b (6) above. As soon as possible, organizational maintenance personnel must find out whether the disperser will be used on a mission in a helicopter or a ground vehicle. This is because an M9 gun is required if the disperser is to be used in a ground vehicle. If the disperser is to

be used in a helicopter a corrugated hose with tiedowns and clamps must be used. It is the responsibility of organizational maintenance personnel to insure that the M9 gun will function when used. There is no better method to insure this than for organizational maintenance personnel to disassemble (if assembled) and reassemble the M9 guns. Assemble the M9 gun as follows:

(1) The M9 gun is shown disassembled in figure B-7 of this manual. Place the barrel assembly in line with the valve body. Engage the key on the barrel assembly in the slot of the valve body. Screw the locknut handtight onto the threads of the valve body.

(2) Insert the connector into one end of the rubber tube.

(3) Hold the assembled valve body and barrel assembly in a vertical position with the barrel assembly end facing down. Depress the trigger safety. Squeeze and hold the trigger open.

(4) Slide the rubber tube into the gun body until the connector seats against the valve body. Release the trigger.

(5) Insert the sleeve into the rubber tube at barrel assembly end. (Stretch the rubber tube if necessary and push the sleeve by hand into the rubber tube as far as it will go.)

(6) Position the collar over the protruding end of the sleeve. Secure the collar to the barrel assembly using three setscrews.

e. Check Operation of Ball Valve. Operate ball valve handle to determine if there is interference with the base. Check the notches in the container neck and the nozzle for alinement. If they are in alinement, grind off a portion of the handle so that the handle clears the base.

f. Test Firing. Fill the agent container (para 4-5) with T1 technical talc (NSN 6810-00-543-7612). Charge the compressed gas cylinders in accordance with instructions in paragraph 4-4. Test fire the disperser mounted in a vehicle (paras. 2-4 and 2-5).

4-2. Used Equipment

a. General. Service a used disperser in the same manner as a new one (para 4-1).

b. Inspection. Examine the disperser closely for signs of wear, damage, or missing parts. Correct deficiencies or notify direct support maintenance personnel. Check that disperser is not contaminated. If it is contaminated, decontaminate using procedures prescribed in paragraph 4-9*b*.

4-3. Disperser Installation and Tiedown

Organizational maintenance personnel are responsible for mounting the fully serviced disperser in the helicopter or ground vehicle. The disperser is transportable on any vehicle (helicopter or ground vehicle) having adequate cargo space that will accommodate the disperser for on-vehicle operation. Use aircraft cargo tiedowns (7, fig. 1-2) to fasten the disperser to the helicopter or the cargo carrier bed. After installing the disperser with the cargo tiedowns, maneuver the vehicle to check the tightness of the tiedowns. Tighten any loosened tiedowns.

Section II. SERVICING

4-4. Charging Compressed Gas Cylinders

WARNING

Do not charge the compressed gas cylinders if the angle valve (11, fig. 2-1) has a pipe fitting seal on the base of the valve. Return disperser to direct support maintenance.

a. General. Inspect the compressed gas cylinders for damage. Check that working parts (valve shafts and handles and quick-disconnect couplings) are not damaged. Check that 4½ year volumetric-hydrostatic test date has not expired (para 4-1*b*(7)).

b. AN-M4 Compressor. There are four models of ne AN-M4 compressor. Refer to technical manual TM 3-4310-100-10 for operating instructions on the compressor model being used and to TM 3-4310-100-20&P for maintenance instructions.

WARNING

Personnel must always position themselves away from the charging hose assembly during charging of compressed gas cylinders. If either the charging hose or the connections fail, the remaining portion of the charging hose will "whiparound" and may injure personnel in its path.

4-5. Filling Agent Container

a. General. The M5 disperser must be charged and filled before it is installed in a helicopter or vehicle. Refer to TM 3-1040-221-12 for charging procedures. Conduct the filling operation downwind from friendly personnel and equipment. Check to see that all valves on the disperser are closed and that gages indicate zero.

b. Removal of Agent Container from Base. Disconnect the output hose assembly from the low pressure nonmetallic hose assembly by separating the quick-disconnect coupling halves. Release three luggage catches that secure the agent container to the base. Lift the agent container from

the base as a unit. Set the agent container upside down on its steel support.

c. Filling Procedure. Loosen the wing nut on the clamp that secures the dispersion section (nozzle, check valve, ball valve, and other hardware) to the agent container neck. Remove the clamp, dispersion section, and preformed packing. The agent is supplied in jeepo containers. Each jeepo container is equipped with a pouring spout and screw cap closure. Each jeepo container holds about eight pounds of agent. (Jeepo containers may be filled with T1 technical talc NSN 6810-00-543-7612 usable for training purposes.) Fill the agent container with agent-approximately 50 lbs of CS. Clean any residual agent from external surfaces of agent container. Some agent containers have filling plug assemblies in the base end of the container. Remove the filling plug and fill the agent container through the opening with agent that is supplied in jeepo containers.

CAUTION

If the ball valve is not alined properly with the agent container, the ball valve cannot be opened when mounted on the base assembly.

d. Assembly of Agent Container to Base. Assemble the preformed packing, clamp, and dispersion section to the container neck. Aline the notches on the container neck and the nozzle flange (para 4-1*e*). Tighten the wing nut on the clamp to secure the dispersion section to container neck. Lift, invert, and set the filled agent container on the base. Engage the three catches to secure the container to the base. Connect the output hose quick-disconnect coupling half to the low pressure nonmetallic hose assembly coupling half.

Section III. SPECIAL TOOLS AND EQUIPMENT

4-6. Tools

Special tools required for organizational maintenance of the disperser are provided in the M27 portable flamethrower-riot control agent disperser service kit (TM 3-1040-221-12).

4-7. Equipment

Special equipment required for organizational maintenance of the disperser is provided in the M27 portable flamethrower-riot control agent disperser service kit (TM 3-1040-221-12).

Section IV. ORGANIZATIONAL PREVENTIVE MAINTENANCE SERVICES

4-8. Before Operation Services

Before issuing a disperser, organizational maintenance personnel are responsible for charging the compressed gas cylinders (para 4-4) and filling the agent container with agent (para 4-5). In addition organizational maintenance personnel must perform all maintenance functions as authorized in the maintenance allocation chart.

4-9. After Operation Services

a. General. Upon receipt of a used disperser, organizational maintenance personnel must decontaminate the disperser (*b* below), maintain the equipment logbook (para 1-2 *a*), and correct any defects reported by the operator. Any defects that cannot be corrected, must be reported to direct support maintenance personnel.

b. Decontamination.

WARNING

Perform decontamination operations downwind of friendly personnel and equipment.

WARNING

Do not use burning as a means for disposing of bags or plastic containers that contained agent because burning can create irritant fumes that are injurious to personnel.

(1) Check to see that all valves on the disperser are closed.

(2) Disconnect the delivery hose assembly (or the nonmetallic hose assembly) at the quick disconect coupling half at the ball valve. Plug the ends of the delivery hose assembly with waste or rags. Lay the hose aside while being careful not to spill any agent remaining in the delivery hose assembly. (If the nonmetallic hose assembly and the M9 portable gun were used, plug the open end of the nonmetallic hose with waste or rags and lay the unit aside.)

(3) Disconnect the hose between the low pressure line section and the dispersion section at the quick-disconnect fittings located just below the container group.

(4) Release the three catches that secure the agent container to the base. Lift the container and the ball valve as a unit from the base. Set the agent container upside down on its steel support.

(5) Using a hammer, tap lightly around the outside of the nozzle and the container neck to dislodge any agent clinging to the nozzle.

(6) Position the assembled unit so that the ball valve outlet faces downwind. Slowly open the ball valve and allow the pressure remaining in the agent container and nozzle to bleed off.

(7) Loosen the wing nut on the clamp that secures the ball valve and nozzle to the container neck. Remove the ball valve and nozzle, clamp, and preformed packing.

(8) Empty any remaining agent into a plastic bag. Tap the agent container lightly with a hammer to dislodge as much agent as possible. Seal the plastic bag with tape and request disposition IAW local regulations.

(9) Mix a decontaminating solution in a 20 gallon capacity container. The mixture consists of 4 ounces of wetting agent (table 1-1) and 1 gallon of monoethanolamine (MEA) (table 1-1) with 9 gallons of water. (For decontaminating procedures see TM 3-220.) Disassemble the agent container, outlet valve, and hoses as required for decontamination. Parts should be placed in the decontaminating solution for a minimum of 30 minutes. The agent tank can be cleaned with solution and a brush. External contamination can be removed using a cloth wetted with the decontaminating solution. Flush all parts using clear water and dry using low pressure compressed air.

(10) Wash down the remaining portions of the disperser using a stream of water. Dry equipment thoroughly.

c. After Mission Services. M5 disperser is a special purpose weapon. When decontamination of the disperser is complete, store the disperser in a secure area. Dispersers should be serviced as far forward as practical. The M4A2 service unit can be used to service high pressure air to the disperser if the need arises.

4-10. Preventive Maintenance Checks and Services

Preventive Maintenance checks and services for organizational maintenance personnel are contained in table 4-1.

Table 4-1. Organizational Preventive Maintenance Checks and Services

Q—Quarterly
Total Man-hours required: 0.8

Sequence Number Q	ITEM TO BE INSPECTED PROCEDURE	Work-time (M/H)
1	Publications Check that a single copy of TM 3-1040-220-12&P is with the disperser and that it is accurate and serviceable. Check that logbook is with the disperser and that entries are current.	0.1
2	External Surfaces Inspect for loose, missing, or damaged nust, bolts, and other hardware. Check gages for broken lens, legibility, and accuracy. Check condition of painted surfaces.	0.1
3	Markings and Identification Inspect the disperser general appearance, paying particular attention to legibility of nameplates, identification plates, and that they are securely mounted.	0.1
4	Accessories Check for presence of and condition of accessories. Check that M9 gun and air delivery hose assembly are serviceable.	0.2
5	Disperser Check the agent container for dents, rust, condition of preformed packing, and serviceability of catches. Check the operation of the handle of the ball valve and that check valve is correctly mounted and is not faulty. Check that base welds are intact and that catches are serviceable. Check the compressed gas cylinders for dents, rust, and that all plumbing connections are tight. Check that dial indicating pressure gages (high and low pressure respectively) operate freely, dials not broken, that pressure regulator is properly set, that relief valve is operative and that rupture disk in safety head assembly is intact.	0.2
6	Control Panel Check the control panel that no parts are missing, weldments broken, or no deformation. Check that all identification are legible.	0.1

Section V. TROUBLESHOOTING

4-11. General

This section contains information for organizational maintenance personnel to use in locating and correcting malfunctions which may develop in the disperser.

4-12. Troubleshooting Table

Table 4-2 tabulates the item number, malfunction, probable cause, and corrective action information useful in diagnosing and correcting unsatisfactory operation or failure. The troubleshooting procedures presented in table 4-2 are performed with the agent container filled with T1 technical talc and the compressed gas cylinders charged with air pressure.

WARNING

Release pressure from disperser before disassembling the disperser to service or repair any part causing trouble.

Table 4-2. Troubleshooting

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
1. AGENT LEAKS FROM M9 GUN.
Step 1. Check for missing connector.
Replace connector.
Step 2. Split rubber tube
Replace rubber tube in M9 gun.
2. AGENT LEAKS BETWEEN DELIVERY HOSE AND M9 GUN.
Step 1. Check for loose connections.
Tighten or remake connections.
3. AGENT LEAKS BETWEEN DELIVERY HOSE AND BALL VALVE.
Step 1. Loose connection.
Tighten or remake connection.
Step 2. Faulty coupling.
Replace quick disconnect coupling half.
4. INCORRECT DISCHARGE (LOW) PRESSURE
Step 1. Low pressure in compressed gas cylinders.
Charge compressed gas cylinders.
Step 2. Globe valve not fully open.
Open globe valve (turn knob counterclockwise).
Step 3 Level plug valve not fully open.
Open Level plug valve (turn handle clockwise 90°).
Step 4. Pressure regulator defective.
Notify direct support maintenance personnel.
Step 5. Safety head assembly rupture disk blown.
Replace rupture disk in safety head assembly. Recharge compressed gas cylinders.
If rupture disk continued to blow, notify direct support maintenance personnel.
5. NO AGENT PRESENT AT HELICOPTER DELIVERY HOSE OR M9 GUN.
Step 1. Agent container empty.
Fill agent container with agent.
Step 2. Obstruction at agent container neck, nozzle, or ball valve.
Remove the obstruction.
6. M9 GUN TRIGGER OR TRIGGER SAFETY INOPERATIVE
Step 1. Dirt or foreign matter under trigger safety.
Clean.
Step 2. Trigger safety catch broken.
Notify direct support maintenance personnel.
Step 3. Trigger safety catch loose.
Adjust then tighten screws.
Step 4. Trigger spring broken.
Notify direct support maintenance personnel.
Step 5. Trigger binds.
Notify direct support maintenance personnel.
7. RANGE TOO SHORT OR RANGE DROPS RAPIDLY.
Step 1. Low pressure in compressed air cylinders.
Charge compressed air cylinders.
Step 2. Globe valve not fully open.
Open globe valve (turn knob counterclockwise).
Step 3. Lever plug valve not fully open.
Open lever plug valve (turn handle clockwise 90°).
Step 4. Helicopter delivery hose assembly blocked.
Check the hose assembly. Clean as required.
Step 5. M9 Gun rubber tube or nonmetallic hose blocked.
Check the rubber tube and hose. Clean as required.

Section VI. PRESSURE GROUP

4-13. Dial Indicating High Pressure Gage

a. Description and Function. This gage is scaled from zero to 3,000 pounds per square inch (psi) graduated in labeled increments of 500 psi. This gage is a round dial bourdon tube type. The dial indicating pressure gage indicates air pressure in the compressed gas cylinders when the globe valve is open.

WARNING

Make sure that all pressure has been relieved from the cylinders before performing any maintenance operation on any component of the disperser.

b. Maintenance. Organizational maintenance personnel are authorized to replace the high pressure dial indicating pressure gage.

(1) *Removal.*

(*a*) Open the angle valve, globe valve, and the lever plug valve. Relieve pressure in the agent container by manually operating the lever of the pressure relief valve.

(*b*) Disconnect the threaded connector of the nonmetallic hose assembly from the reducer at the back of the gage.

(*c*) Remove two nuts and two mounting clips from the back of the gage.

(*d*) Remove the gage.

(2) *Installation.*

(*a*) Coat the threads of the gage with sealing compound (NSN 8030-00-209-8005) or teflon antiseize tape (NSN 8030-00-889-3535).

(*b*) Installation procedure is the reverse of removal procedure, (1) above.

4-14. Dial Indicating Low Pressure Gage

a. Description and Function. This gage is scaled from zero to 200 pounds per square inch (psi), graduated at 10 pound psi increments with labeled graduations every 20 units. This gage indicates air pressure in the agent container when the lever plug valve and the globe valve (para 4-13) are open.

b. Maintenance. Organizational maintenance personnel are authorized to replace the low pressure dial indicating pressure gage.

(1) *Removal.*

(*a*) Open the angle valve, globe valve, and the lever plug valve. Relieve pressure in the agent container by manually operating the lever of the pressure relief valve.

(*b*) Disconnect the threaded connector of the nonmetallic hose assembly from the elbow at the gage.

(*c*) Remove two nuts and two mounting clips from the back of the gage.

(*d*) Remove the gage.

(2) *Installation.*

(*a*) Coat the threads of the gage with sealing compound (NSN 8030-00-209-8005) or teflon antiseize tape (NSN 8030-00-889-3535).

(*b*) Installation of the gage procedure is the reverse of removal procedure, (1) above.

4-15. Rupture Disk

a. Description and Function. The rupture disk is a soft aluminum disk. It is designed to rupture when air pressure against it exceeds 110 pounds per square inch (psi). This rupture disk is located inside the safety head assembly. The rupture disk is the pressure relieving device used to prevent a build up of excessive air pressure if the pressure regulator and relief valve malfunction. The safety head assembly consists of a safety head screw, a retaining ring, a rupture disk, and the safety head body. The safety head assembly is mounted in the cross that is above the lever plug valve and protrudes through the front of the control panel. When the rupture disk ruptures, air pressure escapes to the atmosphere.

b. Maintenance. Organizational maintenance personnel are authorized to replace the rupture disk.

(1) *Removal.*

(*a*) Open the angle valve, globe valve, and the lever plug valve. Relieve pressure in the agent container by manually operating the lever of the pressure relief valve.

(*b*) Loosen the fitting (locknut) that locks safety head threads in the cross. Unscrew the safety head and fitting from the cross as a unit.

(*c*) Use one open end wrench to hold safety head body. Use a second wrench to remove the safety head screw.

(*d*) Remove the retaining ring and the expended rupture disk. Discard the rupture disk.

(2) *Installation.*

(*a*) Install a new rupture disk in safety head body. Install a new retaining ring in the safety head body.

(*b*) Apply a coat of sealing compound (NSN 8030-00-209-8005) or teflon antiseize tape (NSN 8030-00-889-3535) to threads of safety head screws.

(*c*) Screw the safety head screw into the safety head body. Be careful to keep the rupture disk over the opening (properly positioned). Tighten the safety head screw handtight.

(*d*) Tighten safety head screw in safety head body using wrenches in *b* (1) (*c*) above.

(*e*) Install safety head assembly on cross. Tighten fitting to lock it in place, using a wrench.

4-16. Safety Plug

a. Description and Function. The safety plug consists of a brass plug body, a fusible metal plug, a rupture disk, and a nylon gasket. The safety plug is installed in the underside of the connector block. Safety plugs are capable of withstanding pressures between 2,600 to 3,000 pounds per square inch (psi). This safety plug prevents a possible pressure explosion occuring in the compressed gas cylinders due to pressure rising to where the rupture disk and fusible metal plug will blow to allow the air to escape to the atmosphere. (Since the AN-M4 compressor series are used to charge the compressed gas cylinders to a maximum of 2,050 psi pressure, this condition is unlikely to ever occur.)

b. Maintenance. Organizational maintenance personnel are authorized to replace the safety plug.

(1) *Removal.*

(*a*) Close the globe valve and slowly open the angle valve. Allow compressed gas cylinders pressure to bleed off.

(*b*) Use an allen wrench and remove the safety plug from the connector block. Discard the safety plug.

(2) *Installation.*

(*a*) Coat the threads of the new safety plug with sealing compound (NSN 8030-00-209-8005) or teflon antiseize tape (NSN 8030-00-889-3535).

(*b*) Screw the safety plug into the connector block and tighten in place using an allen wrench.

Section VII. GUN GROUP

4-17. Description and Function

The gun group consists of the nonmetallic hose assembly and the M9 portable riot control agent disperser gun (B, fig. 1-3). The M9 gun consists of a valve body, a barrel assembly, a rubber tubing, a connector, a sleeve, a collar, a trigger safety, a trigger spring, and a trigger. The M9 gun is used when the disperser is operated from a ground vehicle. The M9 gun controls the dispersal of agent into the atmosphere.

4-18. Maintenance

The M9 gun is replaceable as a unit by organizational maintenance personnel or by replacing the following parts: barrel assembly, rubber tubing, connector, safety catch, sleeve, collar, and cover plate.

a. Removal.

(1) Rotate the ball depressing ring on the quick disconnect coupling half so that the slot is alined with the lock pin. Pull back on the ball depressing ring. Remove the M9 gun and nonmetallic hose as a unit from the disperser by releasing the quick disconnect coupling half.

(2) Remove the nonmetallic hose from the M9 gun by unscrewing the adapter from the valve body.

b. Nonmetallic Hose Assembly—Disassembly. Unscrew the adapter from the gun end of the hose. Unscrew the quick disconnect coupling half from the bushing. Unscrew the bushing from the adapter. Unscrew the adapter from the end of the hose. Replace bushing, adapter, coupling halves, or hose as required. Assembly is reverse of this disassembly of hose assembly.

c. M9 Gun Disassembly.

(1) Remove the collar by removing three setscrews.

(2) Pull the sleeve from the end of the end of the rubber tubing sticking out of the front of the barrel assembly.

(3) Hold the M9 gun in a vertical position with the barrel end pointing down. Release trigger safety and squeeze the trigger.

(4) Pull the connector and rubber tubing from the gun valve body. Separate the connector from the rubber tubing.

(5) Unscrew the knurled locknut and separate the barrel from the valve body.

(6) Remove two screws that fasten safety catch to valve body and remove safety catch.

(7) Remove two screws from the coverplate and remove the cover plate.

d. Cleaning. Thoroughly clean all metal parts of the M9 gun with drycleaning solvent (stoddard solvent) (NSN 6850-00-281-1985). Wipe dry with clean, soft cloth. Clean rubber tubing and nonmetallic hose assembly with a solution of warm soapy water. Wipe dry with a clean, soft cloth.

e. Inspection. Check the metal parts for damaged threads, dents, cracked welds, and undue wear. Replace if unsatisfactory. Inspect rubber tubing and preformed packings for damage, deterioration, cracks, and wear. If damaged in any way, replace.

f. Assembly of M9 Gun.

(1) Place the barrel in line with the valve body. Engage key on the barrel in slot in the valve. Screw the knurled locknut onto the valve body handtight.

(2) Insert the connector into rubber tubing.

(3) Hold the M9 gun in a vertical position with the barrel end pointing down. Release trigger safety and squeeze trigger.

(4) Insert rubber tubing into the valve body end until connector seats firmly in valve body. Release trigger.

(5) Pull rubber tubing from barrel end and insert sleeve into end of rubber tubing as far as it will go by hand.

(6) Install collar on the barrel, securing it in place with three setscrews.

(7) Install safety catch on valve body and secure with two screws, fingertight. Adjust safety catch so that lip of the catch touches and holds safety catch with the trigger fully forward. Tighten screws and check that adjustment is satisfactory.

g. Assembly of Nonmetallic Hose Assembly.

(1) Connect adapters to both ends of hose.

(2) Connect pipe bushing to one adapter.

(3) Connect quick disconnect coupling half to pipe bushing.

h. Installation.

(1) Connect the adapter end of hose to the M9 gun.

(2) Connect the quick disconnect coupling half end of hose to the ball valve on the disperser. Rotate the ball depressing ring so that the slot and the lock pin are not alined.

Section VIII. HELICOPTER DELIVERY HOSE ASSEMBLY

4-19. Description and Function

The helicopter delivery hose assembly is an accessory. It is issued when the M5 disperser is operated from a helicopter. The helicopter delivery hose assembly consists of a quick disconnect coupling half, adapter, corrugated hose, aluminum tube, and two clamps. (In addition a helicopter frame tiedown and hose tiedown must be used to secure the hose in place on the helicopter when this hose is used.)

4-20. Maintenance

Organizational maintenance personnel are authorized to replace the components of the helicopter delivery hose assembly. Rotate the ball depressing ring on the quick disconnect coupling half so that the slot is alined with the lock pin. Pull back on the ball depressing ring. Remove the quick disconnect coupling half. Unscrew and separate parts from the basic corrugated hose. Clean metal parts with dry cleaning solvent. Wipe dry with a clean cloth. Clean corrugated hose with a solution of warm soapy water. Rinse and dry thoroughly. Examine all parts. Replace if damaged as required. Insert aluminum tube in one end of hose and clamp in place. Place clamp over other end of hose and insert adapter into end of hose. Clamp in place. Install quick disconnect coupling half to the ball valve. Rotate the ball depressing ring so that the slot and the lock pin are not alined.

CHAPTER 5

MATERIEL USED IN CONJUNCTION WITH DISPERSER

Section I. M27 PORTABLE FLAMETHROWER-RIOT CONTROL AGENT DISPERSER SERVICE KIT

5-1. General

The M27 portable flamethrower-riot control agent disperser service kit contains all the special tools and special equipment required for servicing the disperser.

5-2. Use

The use of the M27 service kit is described in TM 3-1040-221-12.

Section II. AN-M4 SERIES, 3½CFM, POWER DRIVEN RECIPROCATING COMPRESSOR

5-3. General

The AN-M4 series, 3-1/2 CFM, power driven reciprocating compressor is a self contained portable gasoline motor driven compressor. It is capable of delivering air compressed up to 2,000 pounds per square inch (psi).

5-4. Use

This AN-M4 compressor is used with the M27 service kit (para 5-2) to service the disperser for charging compressed gas cylinders. The use of the AN-M4 compressor is described in TM 3-4310-100-10.

APPENDIX A

REFERENCES

CTA 50-970	Expendable Items (Except: Medical Class V, Repair Parts and Heraldic Items)
DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders
AR 700-68	Compressed Gas and Gas Cylinders
FM 5-25	Explosives and Demolitions
FM 21-40	Chemical, Biological, Radiological, and Nuclear Defense
FM 21-41	Soldiers Handbook for Nuclear, Biological, and Chemical Warfare
FM 21-48	Planning and Conducting Chemical, Biological, Radiological (CBR), and Nuclear Defense Training
TM 3-4310-100-10	Operator's Manual, Compressor Unit, Reciprocating, Power Driven, 3-1/2 CFM, AN-M4 Series
TM 3-1040-221-12	Operator and Organizational Maintenance Manual Service Kit, Portable Flame Thrower, Riot Control Agent Disperser, M27
TM 3-4240-279-10	Operator's Manual, Mask, Chemical-Biological ABC-M17/M17A1 and Accessories
TM 43-0139	Painting Instructions for Field Use
TM 38-750	The Army Maintenance Management System (TAMMS)
TB 43-180	Calibration Requirements for the Maintenance of Army Materiel
TM 10-277	Protective Clothing Chemical Operations
TM 43-0002-85	Destruction of Chemical Weapons and Defense Equipment to Prevent Enemy Use
TM 740-90-1	Administrative Storage of Equipment
TM 9-1300-200	Ammunition, General
TM 9-1330-200	Grenades, Hand and Rifle

APPENDIX B

BASIC ISSUE ITEMS LIST (BIIL) AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST (ITIAL) AND ORGANIZATIONAL MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

B-1. Scope

This appendix lists basic issue items; items troop installed or authorized; repair parts; and other support equipment required for operation and performance of organizational maintenance of the M5 helicopter—or vehicle-mounted riot control agent disperser and authorizes the requisition and issue of items as indicated by the source and maintenance codes.

B-2. General

This Basic Issue Items, Items Troop Installed or Authorized, Repair Parts and Special Tools List is divided into the following sections:

a. Section II—Basic Issue Items List. Not applicable.

b. Section III—Items Troop Installed or Authorized List.
Not applicable.

c. Section IV—Repair Parts List. A list of repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of authorized parts. Parts lists are composed of functional groups in ascending numerical sequence, with the parts in each group listed in figure and item number sequence. Bulk materials are listed in FSN sequence.

d. Section V—Special Tools List. Not applicable.

e. Section VI—National Stock Number and Part Number Index. A list in ascending numerical sequence, of all National stock numbers appearing in the listings, followed by a list, in alphameric sequence, of all part numbers appearing in the listings. National stock number and part numbers are cross-referenced to each illustration figure and item number appearance. This index is followed by a cross-reference list of reference designations to figure and item numbers when applicable.

B-3. Explanation of Columns

The following provides an explanation of columns found in the tabular listings:

a. Illustration. This column is divided as follows:

(1) Figure number. Indicates the figure of the illustrations in which the item is shown.

(2) Item Number. The number used to identify each item called out in the illustration.

b. Source, Maintenance, and Recoverability Codes (SMR).

(1) Source Code. Source codes are assigned to support items to indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

Code	*Definition*
PA	Item procured and stocked for anticipated or known usage.
PB	Item procured and stocked for insurance purposes because essentially dictate that a minimum quantity be available in the supply systems.
MO	Item to be manufactured or fabricated at organizational level.
AO	Item to be assembled at organizational level.
XA	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
XB	Item is not procured or stocked. If not available through salvage, requisition.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and

fourth positions of the Uniform SMR Code format as follows:

(*a*) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

Code	*Application/Explanation*
C	Crew or operator maintenance performed within organizational maintenance.
O	Support item is removed, replaced, used at the organizational level.

(*b*) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes:

Code	*Application/Explanation*
F	The lowest maintenance level capable of complete repair of the support item is the direct support level.
Z	Non repairable. No repair is authorized.

(3) *Recoverability Code.* Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR code format as follows:

Recoverability Codes	*Definition*
Z	Nonreparable item. When unserviceable, condemn and dispose of the level indicated in position 3.
H	Reparable item. When uneconomically reparable, condemn and dispose of the general support level.

c. National Stock Number. Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

d. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements, to identify an item or range of items.

NOTE

When a stock numbered item is requisitioned, the repair part received may have a different part number than the part being replaced.

e. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr, etc). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. Quantity Furnished with Equipment (Basic Issue Items Only). Not applicable.

i. Quantity Authorized (Items Troop Installed or Authorized Only). Not applicable.

j. Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly.

B-4. Special Information

Action change codes indicated in the left-hand margin of the listing page denote the following:

N—Indicates an added item
C—Indicates a change in data
R—Indicates a change in NSN only

B-5. How to Locate Repair Parts

a. When National Stock Number or Part Number is Unknown:

(1) *First.* Using the table of contents, determine the functional group within which the repair part belongs. This is necessary since illustrations are prepared for functional groups and listings are divided into the same groups.

(2) *Second.* Find the illustration covering the functional group to which the repair part belongs.

(3) *Third.* Identify the repair part on the illustration and note the illustration figure and item number of the repair part.

(4) *Fourth.* Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. When National Stock Number or Part Number is Known.

(1) *First.* Using the Index of National Stock Number and Part Numbers, find the pertinent National stock number or part number. This index is in ascending NSN sequence followed by a

list of part numbers in ascending alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) *Second.* After finding the figure and item number, locate the figure and item number in the repair parts list.

B-6. Abbreviations

Abbreviations	*Explanation*
al	aluminum
cres	corrosion resistant steel
deg	degree
fig	figure
hd	head
id	inside diameter
in	inch
lg	long/length
max	maximum
min	minimum
nc	American National Coarse Thread
nom	nominal
o/a	overall
od	outside diameter
pltd	plated
porm	plus or minus
stl	steel
thk	thick(ness)
w	wide

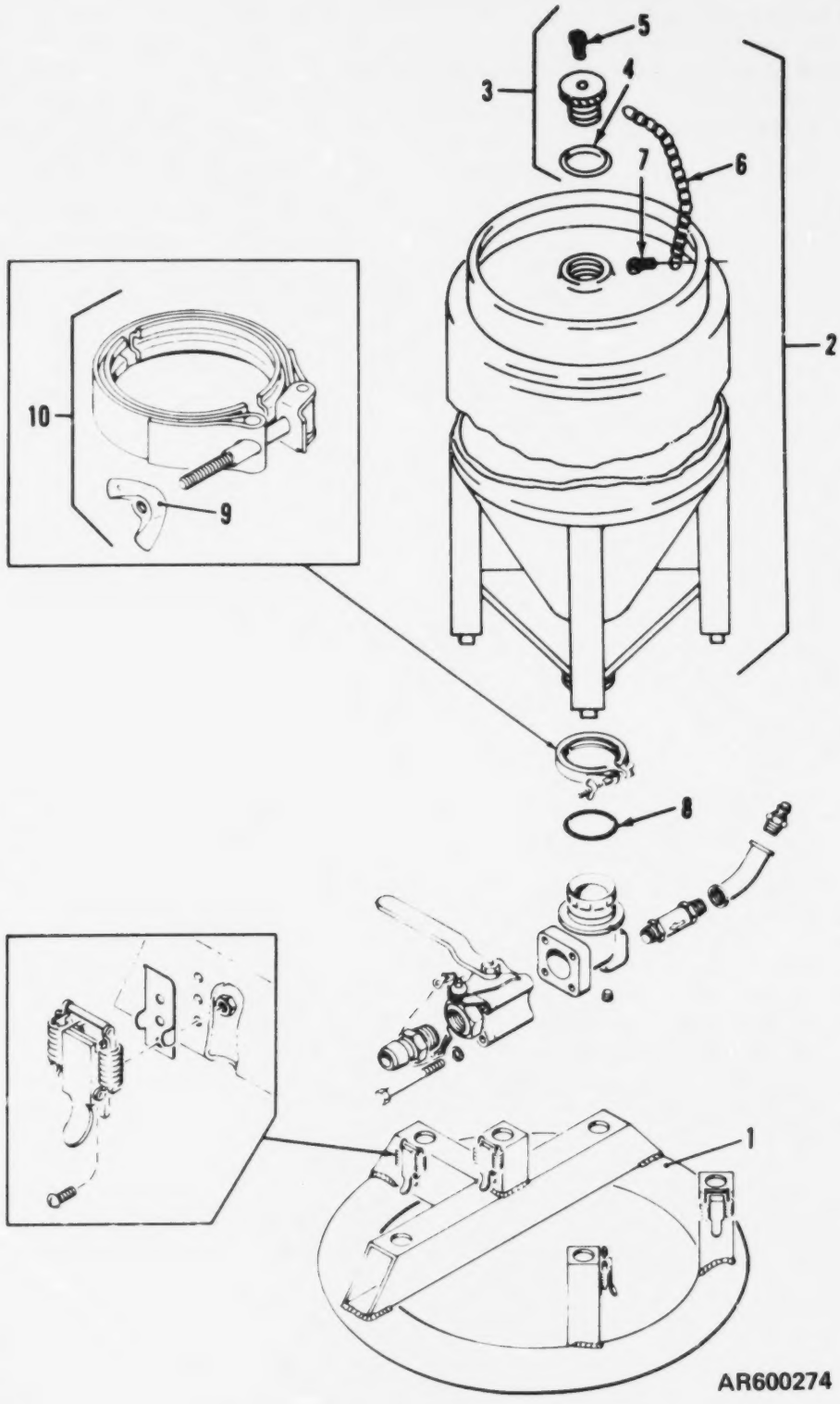


Figure B-1. Base and container group.

SECTION IV. REPAIR PARTS LIST

(1) ILLUS Fig No.	(1) ILLUS Item No.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION Usable On Code	(7) U/M	(8) QTY UNIT
						GROUP: 100 BASE		
B-1	1	XBOFH		D116-6-181	81361	BASE ASSEMBLY	EA	1
						GROUP: 200 CONTAINER		
B-1	2	PBOZZ	1040-00-084-8158	E116-6-177	81361	CONTAINER ASSEMBLY	EA	2
B-1	3	PBOZZ	1040-00-045-3399	D116-6-216	81361	PLUG FILLING ASSEMBLY	EA	1
B-1	4	PBOZZ	5330-00-265-1092	MS29513-219	96906	PACKING PREFORMED, SYNTHETIC 0.139 IN O/A	EA	1
B-1	5	PAOZZ	5305-00-958-4352	MS35207-228	96906	SCREW MACHINE, STL, PAN HD, NO. 6-40, 0.357 IN. LG.	EA	1
B-1	6	PBOZZ	4010-00-228-9949	QQ-C-271 TYPE 2, CLASS 6	81348	CHAIN, STL, 0.023 NOM THICKNESS, APPROXIMATELY 10 IN. LG.	EA	1
B-1	7	PAOZZ	5305-00-969-6914	MS24617-10	96906	SCREW, TAPPING, THREAD STL, PLTD, PAN HD, NO. 6-20, 0.375 IN. LG.	EA	1
B-1	8	PAOZZ	5330-00-194-3720	AN6230-10	88044	PACKING, PREFORMED, SYNTHETIC RUBBER, 2.750 IN. ID, 3 IN OD, 0.125 IN O/H	EA	1
B-1	9	PAOZZ	5310-00-080-8495	MS35425-39	96906	NUT, PLAIN, WING, STL, PLTD, 1/4-20, 1.082 IN. MIN, 1.092 IN. MAX WING SPREAD	EA	1
B-1	10	PBOZZ	5340-00-085-3414	B116-6-177	81361	CLAMP ASSEMBLY	EA	2

SECTION IV. REPAIR PARTS LIST

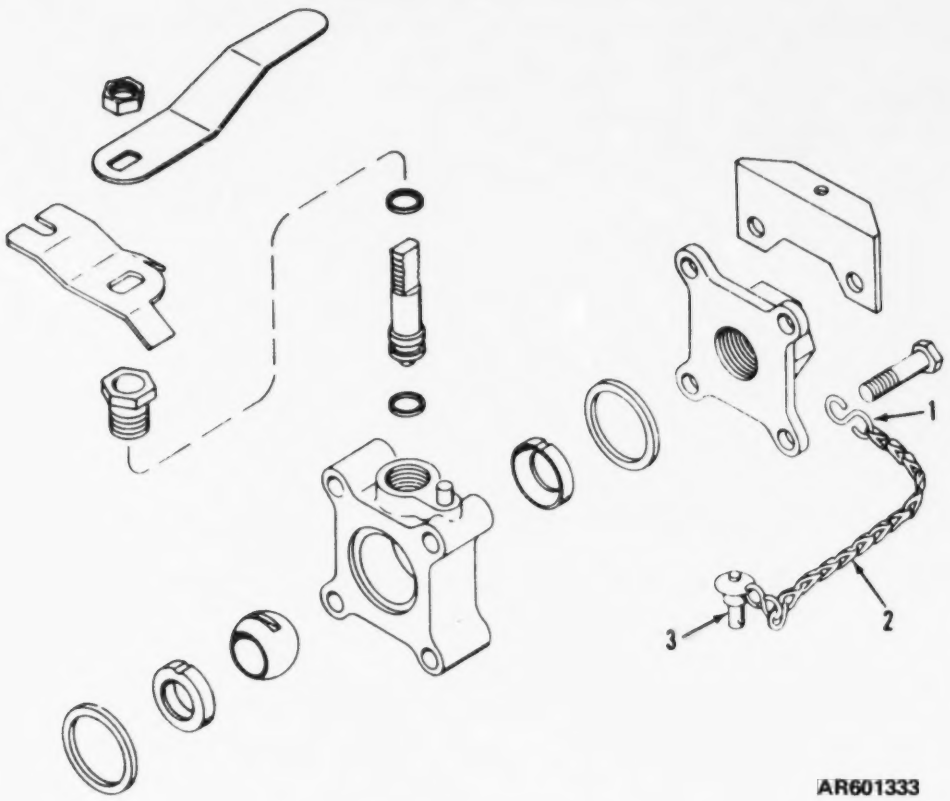


Figure B-2. Ball valve.

(1) ILLUS Fig No.	(1) ILLUS Item No.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION Usable On Code	(7) U/M	(8) QTY IN UNIT
						GROUP: 300 PRESSURE DISPERSION SECTION BALL VALVE		
B-2	1	XBOZZ		B81-3-18	81361	"S" HOOK, SAFETY PLUG	EA	1
B-2	2	XBOZZ		RR-C-271 TYPE 2, CLASS 6	81348	CHAIN, WELDLESS	EA	1
B-2	3	PAOZZ	5340-00-902-5220	NAS1334AS03D	80205	PIN, QUICK RELEASE	EA	1

SECTION IV. REPAIR PARTS LIST

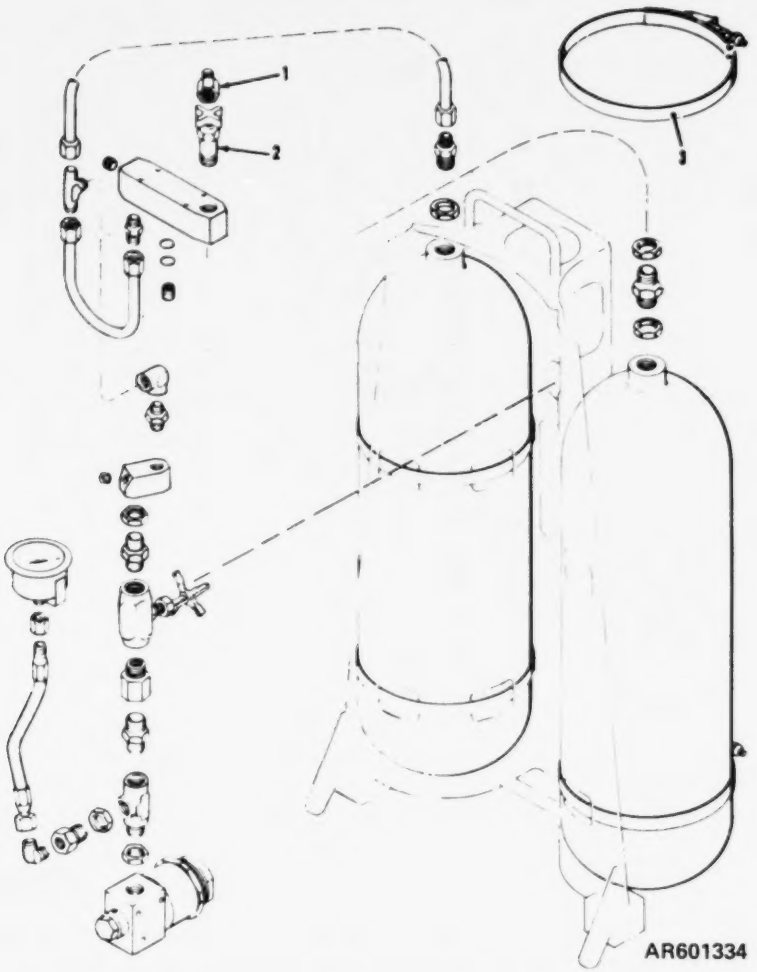


Figure B-3. Pressure, high pressure line section.

(1) ILLUS Fig No.	(1) ILLUS Item No.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION Usable On Code	(7) U/M	(8) QTY INC UNIT
						GROUP: 300 PRESSURE (CON'T)		
						HIGH PRESSURE LINE SECTION		
B-3	1	PAOZZ	1040-00-085-3416	B116-6-179	81361	PLUG, STL, PLTD	EA	1
B-3	2	PAOZZ	4820-00-087-3505	B116-6-174	81361	VALVE, ANGLE	EA	1
B-3	3	PBOZZ	4730-00-081-7256	MS21920-57	96906	CLAMP, HOSE, CRES BAND, STL BOLT, STL NUT	EA	4

SECTION IV. REPAIR PARTS LIST

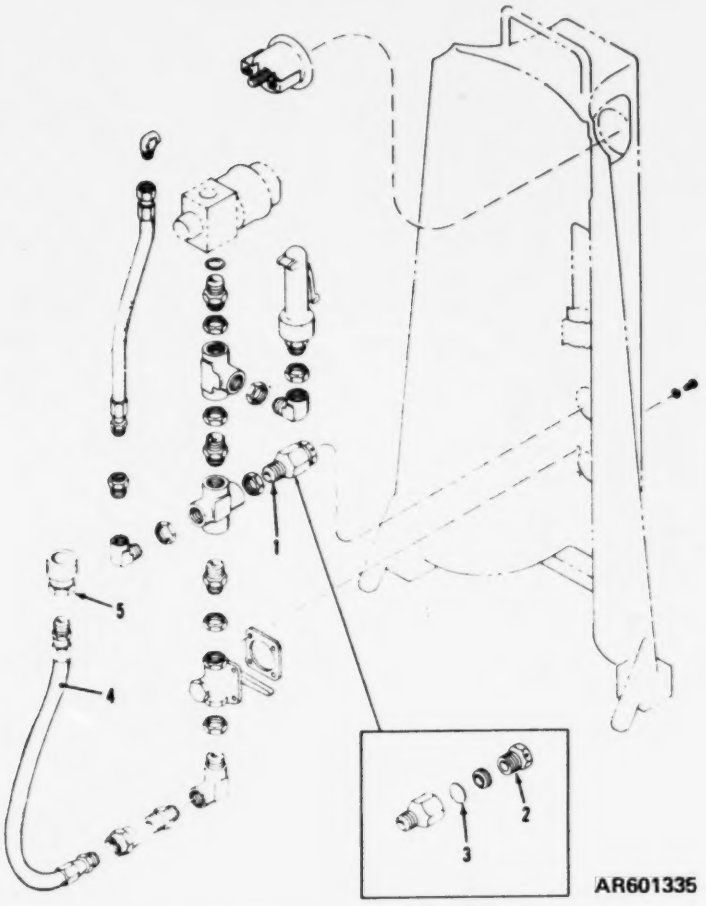


Figure B-4. Pressure group, low pressure line section

(1) ILLUS Fig No.	(1) ILLUS Item No.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION Usable On Code	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 300 PRESSURE (con't)		
						LOW PRESSURE LINE SECTION		
B-4	1	A00ZZ		C116-6-165	81361	HEAD ASSEMBLY, SAFETY	EA	1
B-4	2	PA0ZZ	1040-00-084-8161	B116-6-168	81361	HEAD SAFETY, SCREW TYPE	EA	1
B-4	3	PA0ZZ	1040-00-062-0509	B116-6-172	81361	DISC, RUPTURE (5 PER BOX)	EA	1
B-4	4	PB0ZZ	4720-00-087-6922	C116-6-190-2	81361	HOSE, ASSEMBLY, NONMETALLIC SYNTHETIC RUBBER, REINFORCED, 0.500 IN., ID, 0.891 IN. MIN, 0.953 IN MAX OD, 19 IN. LG.	EA	1
B-4	5	PB0FF	4730-00-062-4334	D150-1-11-3	81361	COUPLING HALF, QUICK DISCONNECT AL, PUSH PULL TYPE, FEMALE FLUID CONNECTION, 1/2-14 NPTF THD	EA	1

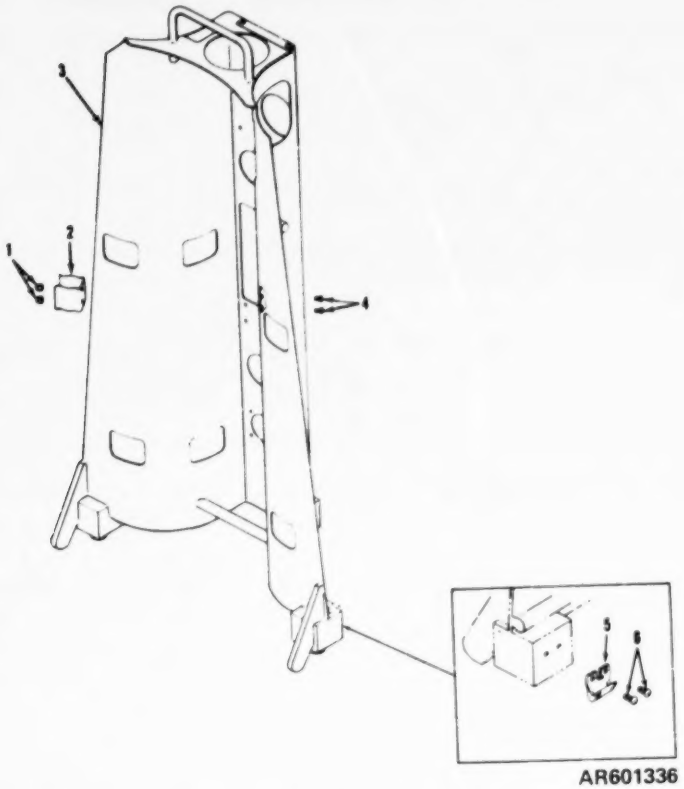


Figure B-5. Pressure group, support section.

(1) ILLUS Fig No.	(1) ILLUS Item No.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION Usable On Code	(7) U/M	(8) QTY UNIT
						GROUP: 300 PRESSURE (CON'T)		
						SUPPORT SECTION		
B-5	1	PAOZZ	5310-00-905-8451	MS21083N06	96906	NUT, SELF-LOCKING STL, NO. 6-32	EA	2
B-5	2	PBOZZ	5340-00-852-5093	100-300-13-2	99378	CLIP, SPRING, TENSION, COPPER, PLTD	EA	1
B-5	3	XAOFH		E116-6-178	81361	SUPPORT ASSEMBLY	EA	1
B-5	4	PAOZZ	5305-00-066-7326	MS24693C24	96906	SCREW, MACHINE, CRES, FLAT HD, COUNTERSUNK, 100 DEG, NO. 6-32 NC 2B, 0.250 LG.	EA	2
B-5	5	PAOZZ	5340-00-582-3934	SC-D-20650-25	80063	STRIKE, CATCH, STL, PLTD, 1-1/32 IN. LG, 1 IN, W, 5/64 IN. THK, 2 HOLES	EA	3
B-5	6	PAOZZ	5305-00-059-3657	MS51958-61	96906	SCREW, MACHINE, STL, PAN HD, SLOTTED, NO. 10-32, NF-2A x 3/8 IN. LG.	EA	6

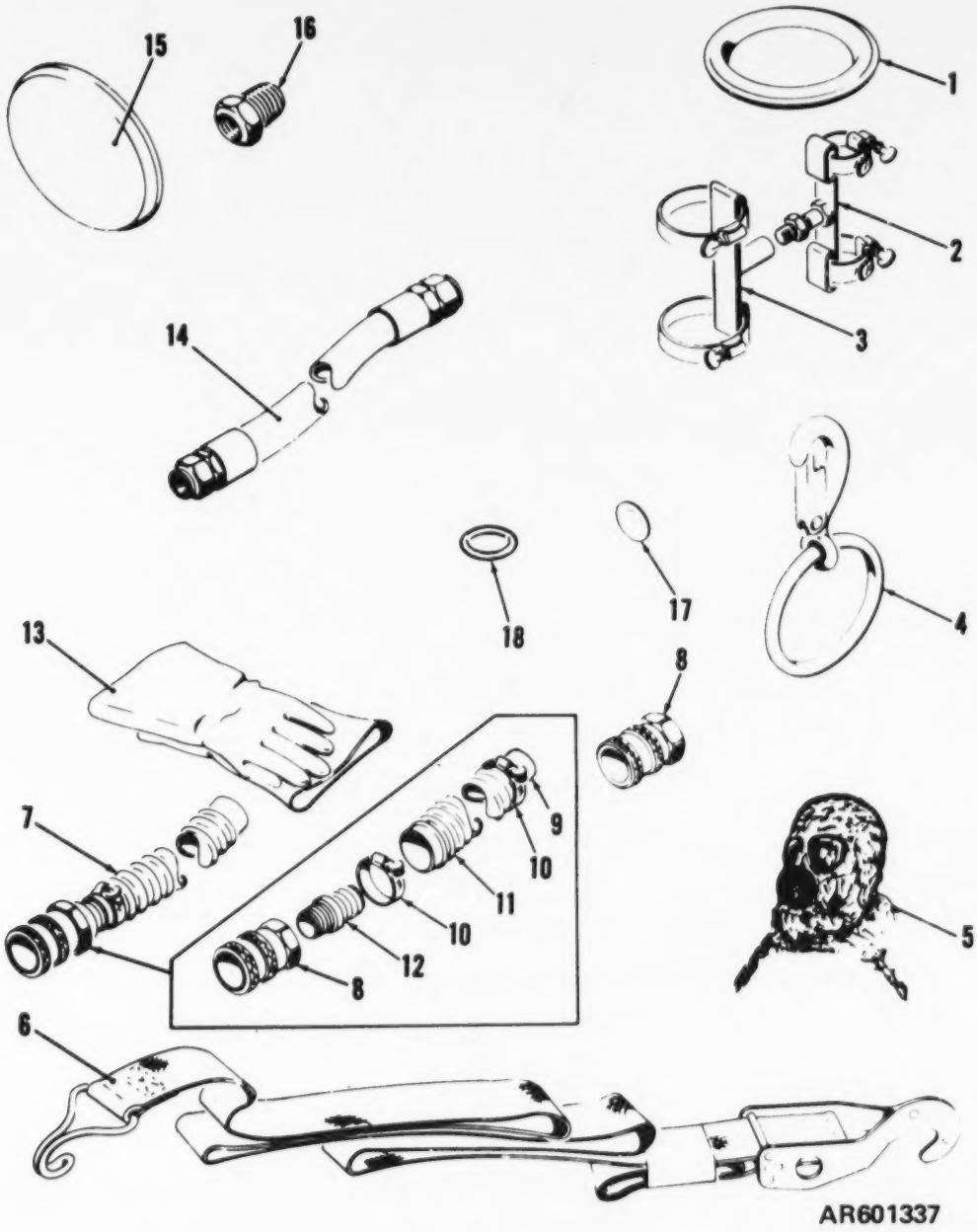


Figure B-6. Accessories group.

SECTION IV. REPAIR PARTS LIST

(1) ILLUS Fig No.	(1) ILLUS Item No.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION Usable On Code	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 400 ACCESSORIES		
B-6	1	PAOZZ	5330-00-194-3720	AN6230-10	88044	PACKING PREFORMED, SYNTHETIC RUBBER 2-3/4 IN. ID, 3 IN. OD, 1/8 IN. O/A	EA	1
B-6	2	PAOZZ	1040-00-790-5562	B116-6-130	81361	TIE DOWN, HOSE	EA	1
B-6	3	PAOZZ	1040-00-789-0490	C116-6-131	81361	TIE DOWN, HELICOPTER FRAME	EA	1
B-6	4	PAOZZ	1040-00-835-3657	C116-6-268	81361	SNAP HOOK AND RING ASSEMBLY	EA	4
B-6	5	PACZZ	4240-00-999-0420	MIL-H-51291 MU/TYPE M6A2	81349	HOOD, CHEMICAL-BIOLOGICAL MASK, M6A2	EA	2
B-6	6	PAOZZ	1670-00-360-0551	MIL-T-7181 TYPE A-1A	81349	TIE DOWN, CARGO, AIRCRAFT, COTTON WEBBING, 2400 LB MIN BREAKING STRENGTH, 15 + T, 3 IN. LG., 2 IN W, W/TIGHTENING DEVICE	EA	4
B-6	7	AOCZZ		C116-6-164	81361	HOSE ASSEMBLY	EA	1
B-6	8	PAOZZ	4730-00-442-9721	D150-1-11-7 A2	81361	COUPLING HALF, QUICK DISCONNECT AL, PUSH PULL TYPE, FLUID CONNECTION END THD FEMALE, U/W, 1-1/2 IN. OD, TUBE, 1-1/2-11-1/2 NPTF	EA	2
B-6	9	PAOZZ	4710-00-454-7488	WW-T-700-6	81348	TUBE, AL, 12 IN. LG., 1.500 OD, 0.049 IN., NOM WALL THICKNESS	EA	1
B-6	10	PAOZZ	4730-00-909-8627	MS35842-13	96906	CLAMP HOSE	EA	2
B-6	11	PAOZZ	4720-00-084-7429	B116-6-185	81361	HOSE, CORRUGATED	EA	1
B-6	12	PAOZZ	4730-00-087-8732	B116-6-186	81361	ADAPTER, STRAIGHT, PIPE TO HOSE AL 1-1/2 IN. NOM HOSE SIZE, 3-3/4 IN O/A LG	EA	1
B-6	13	PAOZZ	8415-00-266-8677	ZZ-G-381	81348	GLOVES, RUBBER, SYNTHETIC RUBBER, 14 IN. LG. SIZE 10	PR	2
B-6	14	PAOZZ	4720-00-061-4648	C116-6-190-4	81361	HOSE ASSEMBLY, RUBBER SYNTHETIC IMPREGNATED, OIL RESISTANT COTTON BRAID, 5/8 IN. ID W/3/4-14 NPT, 10 FT LG, MALE FITTINGS ON EACH END	EA	1
B-6	15	PAOZZ	1040-00-084-7430	B116-6-204	81361	PLATE, COVER, AL	EA	1
B-6	16	PAOZZ	4730-00-541-6236	MIL-F-20672	81349	BUSHING, PIPE, AL, 1-1/2-11-1/2 NPT	EA	1
B-6	17	PAOZZ	1040-00-062-0509	B116-6-172	81361	DISC, RUPTURE	EA	1
B-6	18	PAOZZ	5330-00-265-1092	MS29513-219	96906	PACKING, PREFORMED, SYNTHETIC RUBBER, 1.296 IN., ID, 1.574 IN. OD, 0.139 IN. O/AH	EA	2

Figure B-7. Accessories group, gun section

SECTION IV. REPAIR PARTS LIST

(1) ILLUS Fig No.	(1) ILLUS Item No.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION Usable On Code	(7) U/M	(8) QTY UNIT
						GROUP: 400 ACCESSORIES (CON'T)		
						GUN SECTION		
B-7		PAOFF	1040-00-771-4557	D116-4-16	81361	GUN, PORTABLE, RIOT CONTROL AGENT, M9	EA	1
B-7	1	PAOZZ	4720-00-812-0205	MIL-R-3665	81349	TUBE, RUBBER, NATURAL RUBBER, BLACK 0.343 IN. ID, 0.109 IN. THK WALL, 25-3/4 IN. LG, 2500 PSI TENSILE STRENGTH	EA	1
B-7	2	PAOZZ	1040-00-777-2793	B116-4-32	81361	SLEEVE, AL, 0.386 IN. ID, 0.812 IN OD, 1.343 IN. O/A LG	EA	1
B-7	3	PAOZZ	5305-00-724-5811	MS51964-64	96906	SETSCREW, STL, PLTD, 1/4-28 THD, 1/4 IN. LG, HEADLESS, SOCKETDRIVE, CUPPOINT	EA	1
B-7	4	PAOZZ	1040-00-777-2794	B116-4-33	81361	COLLAR, AL, 1-3/8 IN. DIA, 1-5/8 IN. LG	EA	1
B-7	5	PAOZZ	1040-00-771-4552	C116-4-26	81361	BARREL ASSEMBLY	EA	1
B-7	6	PAOZZ	1040-00-771-4553	C116-4-29	81361	PLATE, COVER	EA	1
B-7	7	PAOZZ	5305-00-984-6193	MS35206-245	96906	SCREW, MACHINE, STL, PLTD, PAN HD, NO. 8-32, 1/2 IN. LG	EA	2
B-7	8	PAOZZ	1040-00-771-4554	B116-4-25	81361	SPRING, TRIGGER	EA	1
B-7	9	PAOZZ	5305-00-984-4984	MS35206-277	96906	SCREW, MACHINE, STL, PLTD, PAN HD, NO. 6-32, 5/16 IN. LG	EA	2
B-7	10	PAOZZ	1040-00-822-1188	B116-4-35	81361	CATCH, SAFETY	EA	1
B-7	11	PAOZZ	1040-00-771-4558	B116-4-23	81361	CONNECTOR	EA	1

Section VI. NATIONAL STOCK NUMBER AND PARTS NUMBER INDEX

National Stock Number	Fig. No.	Item No.
1040-00-045-3399	B-1	3
1040-00-062-0509	B-4	3
	B-6	17
1040-00-084-7429	B-6	11
1040-00-084-7430	B-6	15
1040-00-084-8158	B-1	2
1040-00-084-8161	B-4	2
1040-00-085-3414	B-1	10
1040-00-085-3416	B-3	1
1040-00-771-4552	B-7	5
1040-00-771-4553	B-7	6
1040-00-771-4554	B-7	8
1040-00-771-4557	B-7	
1040-00-771-4558	B-7	10
1040-00-777-2793	B-7	2
1040-00-777-2794	B-7	4
1040-00-789-0490	B-6	3
1040-00-790-5562	B-6	2
1040-00-822-1188	B-7	9
1040-00-835-3657	B-6	4
1670-00-360-0551	B-6	6
4010-00-228-9949	B-1	6
4240-00-999-0420	B-6	5
4710-00-454-7488	B-6	9
4720-00-087-6922	B-4	4
4720-00-061-4648	B-6	14
4720-00-812-0205	B-7	1
4730-00-062-4334	B-4	5
4730-00-081-7256	B-3	3
4730-00-087-8732	B-6	12
4730-00-442-9721	B-6	8
4730-00-541-6236	B-6	16
4730-00-909-8627	B-6	10
4820-00-087-3505	B-3	2
5305-00-066-7326	B-5	3
5305-00-724-5811	B-7	3
5305-00-958-4352	B-1	5
5305-00-969-6914	B-1	7
5305-00-984-4984	B-7	8
5305-00-984-6193	B-7	7
5310-00-080-8495	B-1	9
5310-00-905-8451	B-5	1
5330-00-194-3720	B-6	1
	B-1	8
5330-00-265-1092	B-1	4
	B-6	18
5340-00-852-5093	B-5	2
5340-00-902-5220	B-2	3
8415-00-266-8677	B-6	13

Part Number	FSCM	Fig. No.	Item No.
AN6230-10	88044	B-1	8
		B-6	1
B116-4-23	81361	B-7	10
B116-4-25	81361	B-7	8
B116-4-32	81361	B-7	2
B116-4-33	81361	B-7	4
B116-4-35	81361	B-7	9
B116-6-130	81361	B-6	2
B116-6-168	81361	B-4	2
B116-6-172	81361	B-4	3
		B-6	17
B116-6-174	81361	B-3	2
B116-6-177	81361	B-1	10
B116-6-179	81361	B-3	1
B116-6-185	81361	B-6	11
B116-6-186	81361	B-6	12
B116-6-204	81361	B-6	15
B81-3-18	81361	B-2	1
C116-4-26	81361	B-7	5
C116-4-29	81361	B-7	6
C116-6-131	81361	B-6	3
C-116-6-164	81361	B-6	7
C116-6-165	81361	B-4	1
C116-6-190-2	81361	B-4	4
C116-6-190-4	81361	B-6	14
C116-6-268	81361	B-6	4
D116-4-16	81361	B-7	-
D116-6-181	81361	B-1	1
D116-6-216	81361	B-1	3
D150-1-11-3	81361	B-4	5
D150-1-11-7A2	81361	B-6	8
E116-6-171	81361	B-1	2
E116-6-178	81361	B-5	3
MIL-F-20672	81349	B-6	16
MIL-H-51291 /MU/Type M6A2	81349	B-6	5
MIL-R-3665	81349	B-7	1
MIL-T-7181 Type A-1A	81349	B-6	6
MS21083N06	96906	B-5	1
MS21920-57	96906	B-3	3
MS24617-10	96906	B-1	7
MS24693C24	96906	B-5	3
MS29513-219	96906	B-1	4
		B-6	18
MS35206-227	96906	B-7	8
MS35206-245	96906	B-7	7
MS35207-228	96906	B-1	5
MS35425-39	96906	B-1	9
MS35842-13	96906	B-6	10
MS51964-64	96906	B-7	3
NAS1334-AS03D	80205	B-2	3
QQ-C-271 Type 2, C1 6	81348	B-1	6
RR-C-271 Type 2, C1 6	81348	B-2	2
WW-T-700-6	81348	B-6	9
ZZ-G-381	81348	B-6	13
100-300-13-2	99378	B-5	2

APPENDIX C

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

C-1 General

The maintenance allocation chart (sec II) lists the authorized maintenance functions assigned the maintenance categories for maintenance of the M5 helicopter—or vehicle—mounted riot control agent disperser. This chart is to be used by all levels of maintenance to insure complete support of the equipment.

C-2. Maintenance Functions

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical and/or electrical characteristics with standards through examination.

b. Test. To verify serviceability and detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. Adjust. To maintain within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust by discrepancy in the accuracy of the instrument being compared.

f. Replace. The act of substituting a serviceable like type part, subassembly or module (component or assembly) for an unserviceable counterpart.

g. Repair. The application of maintenance services or other maintenance actions to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

C-3. Column Entries

a. Column 1, Group Number. Column lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Component/Assembly. Column 2 contains the noun names of components, assemblies, subassemblies, and modules for which the maintenance is authorized.

c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in Column 2.

d. Column 4, Maintenance Category. Column 4 specifies by the listing of a "worktime" (WT) figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate "worktime" figures will be shown for each category. The number of man-hours specified by the "worktime" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. This time will be expressed in man-hours (MH) and carried to one decimal place (tenths of hours).

e. Column 5, Tools and Equipment. Column 5 specifies by code, those common tool sets and special tools, tests and support equipment required to perform the designated function.

Section II

MAINTENANCE ALLOCATION CHART

For

DISPERSER, RIOT CONTROL AGENT, HELICOPTER OR VEHICLE-MOUNTED, M5

(1) Group number	(2) Component assembly	(3) Maintenance function	(4) Maintenance category C	O	F	H	D	(5) Tools and equipment
100	BASE GROUP						**	
	Base Assembly	Inspect	0.1					1, 3
		Service		0.2				
		Replace		0.2				
		Repair				1.0		
200	CONTAINER GROUP						**	
	Clamp Assembly	Inspect	0.1					1
		Service		0.2				
		Replace		0.1				
	Container Assembly	Inspect	0.2					1, 2, 4,
		Test				2.0		
		Service		0.3				
		Replace		0.2				
		Repair		0.5				
	Packing, Preformed	Inspect		0.1				1
		Replace		0.1				
300	PRESSURE GROUP						**	
	Dispersion Section							
	Nozzle	Inspect		0.1				1, 6
		Service		0.2				
		Replace			0.4			
	Pin, Quick Release	Inspect	0.1					1
		Replace		0.2				
	Valve, Ball	Inspect	0.1					1, 6
		Service		0.3				
		Replace			0.2			
		Repair			0.3			
	Valve Check	Inspect	0.1					1, 6
		Replace			0.2			
	High Pressure Section							
	Cylinder, Pressure	Inspect		0.1				1, 4, 7
		Test				2.0		
		Service		0.3				
		Replace			0.5			
	Gage, Pressure	Inspect	0.1					1, 5
		Calibrate						
		Replace		0.5				
	Plug, Safety	Inspect	0.1					1
		Replace		0.2				
	Regulator, Pressure	Inspect		0.1				1, 2, 7
		Adjust				0.5		
		Replace			1.0			
		Repair				1.0		
	Tube and Hose Assemblies	Inspect		0.2				1
		Replace			0.5			

*The subcolumns are as follows:
C—operator/ crew
O—organizational
F—direct support
H—general support
D—depot
**Worktimes are included in DMWR

(1) Group number	(2) Component assembly	(3) Maintenance function	(4) Maintenance category* C	O	F	H	D	(5) Tools and equipment
300	Pressure Group (cont.)							
	High pressure section							
	Valves, Globe and Angle	Inspect		0.2				1, 2
		Replace			0.5			
	Low Pressure Section							
	Gage, Pressure	Inspect	0.1					1, 5
		Calibrate						
		Replace		0.5				
	Head, Safety	Inspect		0.1				1
		Replace		0.1				
		Repair		0.2				
	Hose Assemblies	Inspect	0.2					1, 6
		Service		0.5				
		Replace		0.1				
	Valve, Safety Relief	Inspect	0.1					1
		Service		0.5				
		Replace			0.5			
400	ACCESSORIES GROUP						**	1, 6
	Hose Assemblies	Inspect	0.1					
		Service		0.3				
		Replace		0.1				
		Repair		0.2				
	Gun Section							
	Gun	Inspect	0.1					1, 6
		Service		0.3				
		Adjust		0.2				
		Replace		0.1				
		Repair		0.2				

*The subcolumns are as follows:
C—operator/ crew
O—organizational
F—direct support
H—general support
D—depot
**Worktimes are included in DMWR

Section III

TOOL AND TEST EQUIPMENT REQUIREMENTS

Tool or Test Equipment Reference code	Maintenance Category	Nomenclature	National/ NATO Stock Number	Tool Number
1	O, F, H	Tool Kit Automotive Mechanics	5180-00-754-0641	
2	H	Tool Kit Automotive Maintenance, Common Set, No 2	4910-00-754-0650	
3	H			
4	H	Welding Set Arc: Inert Gas Shielded SA-111-AC/DC or equal	3431-00-837-5573	
5	F, H	Test Set, Flamethrower, Riot Control Agent Disperser, Hydro-static and volumetric, 6,000 PSI, M5	1040-00-050-7952	
6	O, F			
7	O, F, H	Pressure Gage Tester	4931-00-621-7877	
		Compressor, Power-driven, AC 115 V.2.3. CFM, 150 PSI	4310-00-274-6629	
		Compressor, Unit, Reciprocating: P/D 3½ CFM, AN-M4C	4310-00-078-5431	

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DATE
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PUBLICATION NUMBER	DATE	TITLE
TM 3-1040-220-12	21 May 1963	Disperser, Riot Control Agent, Helicopter Vehicle Mounted, M5

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Add the following to the text:

"If no test date appears on the air cylinder or agent container as described above, check the IOC markings for the date of manufacture. This date usually appears as the last row of numbers with the first set (one or two digits) being the month and the second set (two digits) being the year of manufacture. If the date is less than 54 months, testing will not be required."

REASON: Quinquennial testing is required.

Delete "END ITEM CODE 32" from title of the manual.

REASON: AR310-3 prohibits use of EIC as part of manual title.

General Recommendation.

Recommend that TM 3-1040-220-12 including all changes be revised to update the TM due to the number of changes and the percentage of the TM that is outdated.

REASON: Refer to AR310-3, Chapter 1, paragraph 1-11 for criteria.

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